JPRS 74988

23 January 1980

USSR Report

ECONOMIC AFFAIRS

No. 909

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available through Bell & Howell, Old Mansfield Road, Wooster, Ohio, 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. JPRS 74988	2.	3. Recipient's Accession No.
4. Title and Subtitle USSR REPORT: ECONOMIC AFFAIRS, No. 909			5. Report Date 23 January 1980 6.
7. Author(s)			8. Performing Organization Rept. No.
9. Performing Organization Name and Address Joint Publications Research Service 1000 North Glebe Road Arlington, Virginia 22201			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address As above			13. Type of Report & Period Covered 14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

This serial report contains information on recent administrative plans, changes, and policy trends, items on the state of the national economy, significant and representative comments and statistics on principal industrial sectors.

17. Document Analysis a. Descriptors

USSR
Economics

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group 5C

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
Unlimited Availability Sold by NTIS Springfield, Virginia 22161	UNCLASSIFIED	93
	20. Security Class (This Page) UNCLASSIFIED	22. Price

(See ANSI-Z39.18) See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

JPRS 74988

23 January 1980

USSR REPORT

ECONOMIC AFFAIRS

No. 909

CONTENTS

BACHURIN DISCUSSES NEW STAGE IN PLANNING

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 10, Oct 79 pp 3-18

[Article by A. Bachurin, deputy chairman of USSR Gosplan]

[Text] Guided by Lenin's doctrine concerning the principles and methods of planned management of the socialist economy and applying it creatively to the present-day conditions and requirements of advanced socialism, the Communist Party defined at the 25th Congress and subsequent plenums of the CPSU Central Committee the principal direction for further improvement of the entire economic system. Improvement of national economic planning, which is a main link in the system of managing the country's economic and social development, is given paramount importance among them.

The decrees recently adopted to implement the decisions of the 25th party congress--the decree entitled "On Further Improvement of the Economic System and the Tasks of Party Organs and Government Agencies" of the CPSU Central Committee and the decree entitled "On Improvement of Planning and Enhancement of the Impact of the Economic System on Raising Production Efficiency and the Quality of Performance" of the CPSU Central Committee and the USSR Council of Ministers--defined the specific directions for improvement of all planning work in the national economy and for making economic levers and incentives more effective. The measures envisaged include the drafting of proposals for improvement of the organizational structure of management, and the directions to be taken in this work have been defined. Thus every link in the economic system is to be improved.

Implementation of the decisions that have been taken has tremendous economic and political importance. This is a new stage in improvement of the management of the economy, a stage which with respect to the scale and goal of the measures anticipated fully corresponds to the economic strategy worked out by our party and to the operation of objective laws in the context of mature socialism. One of the principal peculiarities of this stage is that the economic system is having a greater impact on raising the efficiency of social production and the quality of all performance. Measures are being taken to improve the planned guidance of the unified national economic complex; specific tasks in this area have been assigned to USSR Gosplan, USSR

ministries and departments and councils of ministers of union republics. At the same time specific directions have been defined for the improvement of the economic system at the level of associations, enterprises and organizations, i.e., within the sphere of material production itself.

The comprehensive approach to improvement of all links in economic management has resulted from the augmented scale of social production, the considerably more complicated nature of intersector and interregional relations, and the requirements of the present-day scientific-technical revolution.

The decrees which have been adopted take as their point of departure the sizable growth of the country's economic potential and the fact that efficient use of what has been created has paramount importance. At the same time they take into account the tasks in economic and social development in the near future, whose successful performance requires greater determination to put social production on the road of intensive development thanks to faster scientific-technical progress, improvement of proportions in the national economy, higher productivity of social labor and improved product quality, and economical use of raw materials, supplies and fuel. All of this actually lay behind the specific directions adopted for further improvement of planning in the national economy.

Raising the Level of Multiannual Planning

The decree of the CPSU Central Committee and USSR Council of Ministers established for the first time the procedure and deadlines for drafting an interrelated system of plans in which the leading role is to be given to multiannual plans drafted for 5-year periods and over the longer range. This is a vivid manifestation of the development of Lenin's idea of the paramount importance of multiannual planning in managing a socialist economy. It is the purpose of multiannual plans to realize long-range strategic projects in the domain of economic and social development as defined by decisions of congresses of the Communist Party.

The interrelationships of scientific-technical planning and economic and social planning can be clearly traced in the system of plans which has been established. The role of a comprehensive program of scientific-technical progress, drafted for a 20-year period and continuously in effect, is being enhanced so that the advances of science and technology can be more fully taken into account in plans for economic and social development. It has been proposed that it be revised every 5 years so as to take into account the advances of science and new technical developments, whose realization would be provided for in 5-year and annual plans. Compiling the program for the 5 years that follow makes it possible to always have a long-range (20-year) projection of the development of science and technology; this is very important to correct determination of proportions and indicators envisaged in the main lines of the country's economic and social development, which are drafted for 10-year periods. They will also be continuously in effect

thanks to revisions every 5 years and the drafting of indicators and balances for the new 5-year period.

The 10-year period makes it possible to guarantee sound determination of the main lines of economic and social development for a sufficiently broad range of indicators of the development of sectors and industries, of the economy of the union republics, and also of economic regions; and for the first 5 years, moreover, there would be a breakdown by years. This will make it possible to always have a scientifically sound projection to be used in compiling the 5-year plan of economic and social development, whose role in the planning of the national economy and in the activity of every enterprise is considerably enhanced. To a certain degree, then, there will be a change in the role of annual plans, whose purpose it is to detail the assignments of the 5-year plan and, if necessary, revise them so as to take into account scientific-technical advances and any change in the needs of society. The role of the annual plan is moreover enhanced in the performance of organizational and economic measures aimed at unconditional fulfillment of the assignments of the 5-year plan, which is the principal instrument for carrying out the party's economic policy. An opportunity is thereby afforded for reducing the unjustifiably large number of decisions which not uncommonly have to be taken because of shortcomings in multiannual planning.

At the same time that the orderly system of plans and the procedure and deadlines for drafting them were established, the most important directions were also defined for improving planning work in general. It is their purpose to guarantee the following: selection of the most effective ways of achieving high final results for the national economy in multiannual and current plans; optimum combination of development by sectors and industries with regional development and of multiannual plans with current plans; and improved proportions and balanced growth of the economy. Consequently, the task is to raise the quality of plans, improve the content and methodology of planning, and perfect the methods of drafting national economic plans, especially multiannual plans.

The continuous growth in the scale of social production is accompanied by an increase in the number of sectors and major regional production complexes, as well as by an intensification of the processes of concentration and specialization of production. This necessitates a number of new solutions in multiannual economic planning and a correct combination of measures to improve centralized methods of planning with development of the economic initiative and independence of ministries, associations and enterprises.

The decrees which have been adopted have developed the principle of democratic centralism both in the fields of planning and management and also in the use of economic levers and incentives. On the one hand the principles of centralism are being reinforced in planning through improvement of the system of plans and balances, by guaranteeing the continuous currency of multiannual plans, and by enhancing the role of the 5-year plan in the balanced and proportional development of the economy and in the organization

of relations in the economy. On the other hand the rights of ministries, associations and enterprises are broadened in the drafting of plans, in the use of economic incentive funds, in the administration of progressive new forms of remuneration, and so on.

Improvement of centralized planning is being guaranteed at the same time that the principles of cost accounting are being strengthened and the initiative of work collectives is being developed in the drafting and fulfillment of their own plans. Moreover, production associations are becoming the basic and primary unit of industry and construction; this makes it possible to utilize more fully the advantages of democratic centralism in planning and management.

The many years of experience of our country and the other socialist states have convincingly demonstrated that the interrelated tasks of ensuring balance, proportionality and efficiency of the economy in the context of large-scale multisector social production can be performed effectively only on the basis of improved multiannual planning. This is the essence of the problem of correctly combining multiannual and current plans in the present stage. Only on this basis is it possible to create prerequisites more conducive to increasing the effectiveness of economic levers and incentives.

The economic strategy worked out by the Communist Party calls for a long-range orientation toward increased prosperity of the people on the basis of an unstinting rise in the efficiency of social production as a whole. Effective implementation of that strategy depends decisively on ensuring in multiannual plans the conditions necessary to speeding up scientific-technical progress and improving the proportions and production structure of the national economy. Solving these complicated problems necessitates a strengthening of the multiannual approach and is impossible on the basis of annual plans, whose quality depends in turn on the scientific soundness and internal consistency of 5-year plans.

It is for that reason that the party and government, as they have taken steps to improve the system of plans, have been putting the main emphasis on substantial improvement of multiannual planning. Planning agencies and economic entities must strengthen the multiannual approach both in solving major scientific-technical, economic and social problems, and also in making provision for intersector and interregional connections and the necessary conformity to plan in the economic activity of enterprises.

It will be particularly important to achieve greater scientific soundness and internal consistency of 5-year plans and to make them in fact the principal form for directive economic planning by the state and the work program governing the economic activity of every association and enterprise.

There was indication of the need to enhance the role of 5-year plans in economic development as far back as the September (1965) Plenum of the CPSU Central Committee. Since that time certain work has been done to improve

the drafting and balancing of 5-year plans, which beginning with the Ninth Five-Year Plan began to be approved along with breakdowns of the most important assignments by years. In the 10th Five-Year Plan the planning and accrual of economic incentive funds were linked to fulfillment of the 5-year plan by enterprises and ministries. But the task of making it the principal form of national economic planning has still not been performed as it should be. Until recently economic connections among enterprises and the conclusion of contracts were mainly regulated by annual plans. Beginning with the second year of the 5-year plan the volume of capital investments established for the relevant year in the 5-year plan was changed in the case of many ministries and councils of ministers of union republics (and accordingly for associations and enterprises). At the same time assignments were revised for output and qualitative indicators of performance. Under such conditions it was difficult to guarantee stability of economic norms. Consequently, economic incentives did not create the requisite motivation or--the main thing--responsibility for fulfillment of the assignments of the 5-year plan on the part of ministries and enterprises.

The practice of frequent revision of targets assigned for capital construction, output and efficiency indicators led to adverse consequences in the economy. It fosters a squandering of capital investments over numerous projects and makes it more difficult to establish in plans the uniform pace that is necessary in the activation of construction projects and in production. Serious related difficulties arise in the organization of capital construction, which because of the length of the production cycle cannot be organized so that it operates in conformity to plan and at a uniform pace solely on the basis of annual plans.

That is why the organizational and economic prerequisites for enhancing the role of the 5-year plan as the principal planning form, envisaged by the decree, are in our opinion among the key aspects of improving national economic planning. Of paramount importance among them will be the adoption, beginning with the 11th Five-Year Plan, of stable 5-year plans for capital construction (with assignments broken down by years), balanced against the material, labor and financial resources, the equipment available, and the capabilities of construction organizations.

This in turn makes it necessary to decisively correct the present squandering of resources over an excessively large number of projects under construction at one time and to reduce the number of new starts and the volume of unfinished construction. The decree points out that it is quite important to make the transition to planning present production and new construction as a unified whole whose purpose it is to ensure more optimum distribution of capital investments over the country's sectors and regions as a direct function of the growth of the volume of products and services projected in 5-year and annual plans. Necessary to this are improvement of the norms and standards used in capital construction, including standard allowances of specific capital investments; improvement of the practice of drafting planning balances and computations of the utilization of existing production capacities and fixed capital; compilation of summary plans for reconstruction

and retooling of existing enterprises, provision being made to allocate funds for these purposes first; strict adherence to the requirement that resources are to be allocated for construction of new enterprises and expansion of existing ones when the needs for their products cannot be met through reconstruction and retooling of existing enterprises.

It is for that reason very important to consistently realize in practice the benefits and advantages which have now been afforded production associations and enterprises in the industrial sector and also construction organizations in carrying out projects for retooling and reconstruction of existing enterprises. There is no doubt that the changes which are being made in the indicators of the plan and in the criteria for assessment of the work of construction organizations and the transition to settlement between clients and contractors for enterprises and projects on which construction has been completed will help to reduce construction time and to ensure the necessary uniformity of pace in the work of construction and installation organizations.

A second and equally important prerequisite for improving the quality of 5-year plans and for enhancement of their role in management of the economy is related to a substantial improvement of their internal consistency with respect to each year of the 5-year period.

As the decree points out, balances of materials and labor resources and of production capacities, a financial balance and a balance of personal money income and expenditures are to be drafted as part of the format of the 5-year plan. Material and financial reserves--as well as reserves of production capacities in the necessary cases--are also to be provided for in accordance with the standard allowances established.

The course which has been adopted of making our plans more effective and enhancing their social orientation places among the priority problems the thorough and comprehensive study of social needs over the multiannual period. This will involve a great deal of work to improve the norms and standards supplied in planning, and at the same time the role of stable economic norms differentiated by years will be considerably enhanced in 5-year planning. Economic levers and incentives promoting successful fulfillment of the assignments of the 5-year plan will be able to operate more vigorously on this basis.

Enhancement of the quality and internal consistency of 5-year plans is largely bound up with improving the planning of labor resources and the social development of work collectives. The decree pays a great deal of attention to these matters, since ultimately production efficiency is determined by improvement of the organization of work and the quality of performance and by a rise in the productivity of social labor. The task has accordingly been set forth of drafting the labor plan in an organic linkage with the other indicators of the social development of work collectives. Provision has been made to work up balances of labor resources both on the

scale of the entire country and also in union republics, oblasts and cities. Inclusion of a summary section covering the entire set of measures in the domain of social development, including improvement of working conditions, in the 5-year plan for economic and social development at all levels of administration will have great importance. Jointly with local planning agencies and agencies for labor affairs, as well as with subordinate associations and enterprises, ministries should draft plans for furnishing them manpower. The role of local agencies for labor affairs in finding jobs for workers who have been displaced is also being enhanced.

In connection with carrying out the measures the decree has outlined for speeding up scientific-technical progress, with strengthening incentives for the rise of labor productivity, and also with the upcoming increase in the need for labor resources in the regions east of the Urals, there is a greater need to make labor resources available at existing enterprises, especially in the European regions. This necessitates improvement of the planned redistribution of personnel by USSR Goskomtrud [State Committee for Labor and Social Problems] and by republic and local agencies for labor affairs. There is also good reason to intensify the work being done in USSR Gosplan and the planning agencies of the union republics to prepare recommendations for rational allocation and use of labor resources, whose implementation is to be provided for in the 11th Five-Year Plan.

It is the task of multiannual plans to guarantee optimum utilization of labor resources on the scale of the entire country. Planning agencies have reliable long-range population forecasts. There is a certain unevenness in the growth of the able-bodied population from region to region of the country. In the location of the productive forces and in the planning of capital investments due attention is still not being paid to effective use of labor resources and their stabilization. Too little consideration is being given to these tasks in the process of project planning when the size of new enterprises is determined.

In the European regions of the country large new enterprises are being built without due consideration of the growth of labor and energy resources. Enterprises are still being built in oblast centers, and opportunities are not being taken to locate small specialized affiliates in small cities and rural rayons which have a labor supply. Excessive concentration of the industrial sector and of scientific and other organizations is occurring in the capitals of the union republics and major cities. As a consequence the problems of stabilization of labor resources, of improving the quality of work and of raising labor productivity, of correctly combining the development of agriculture with that of industry, of raising the efficiency of existing productive capital and of boosting the output capital ratio are slow to be solved.

In order to correct these shortcomings there is to be a substantial improvement, beginning with the 11th Five-Year Plan, in the location of the productive forces; consistent adoption of the measures outlined to improve the planning of labor and incentives for fulfillment of the plan with fewer

workers and employees is to be guaranteed. The plan is to include specific steps to ensure comprehensive solution of the problem for stabilization of labor resources, especially in the regions of Siberia and the Far East, in the 1981-1985 period. In our view this is one of the important directions for raising production efficiency in the coming 5-year period and also for enhancing the soundness and realism of the plan covering the 11th 5-year period.

To improve the quality of the 5-year plan it is quite important to break the control figures down punctually by ministries, associations and enterprises. A greater role will be given to USSR Gosplan in performing this task; in accordance with the draft of the main lines for economic and social development of the USSR up to 1990, which has been duly approved, it has been ordered to compile control figures for the principal indicators and economic norms for the coming 5-year period in a breakdown by years and to break them down by ministries and councils of ministers of union republics 1 year in advance of commencement of each successive 5-year period. Ministries and councils of ministers of union republics are in turn to prepare control figures and break them down by associations and enterprises. This procedure will make it possible for enterprises to begin in good time the drafting of 5-year plans, to join with sales organizations in doing the necessary preparatory work with suppliers and consumers so as to determine the list of products to be produced with a view to concluding business contracts for the 5-year period.

It will be very important to assess fulfillment of 5-year plans (at all levels of administration) cumulatively from the beginning of the 5-year plan, rather than according to the sum total of the annual plans, as was previously done. This principal will motivate the drafting of strenuous annual plans; if the assignments of the 5-year plan are not fulfilled in a particular year ministries or enterprises must make up what has been lost in the next year. The measures envisaged to improve economic levers and material incentives conform to this principle. On the whole this should enhance motivation and economic accountability of economic entities for fulfillment of the 5-year plan.

Thus the decree adopted has not only advanced the task of increasing the role of the 5-year plan, but it has also defined specific ways of performing that task. Transforming the 5-year plan into the principal form of planing, accompanied by appropriate restructuring of economic levers and incentives, is a very important direction for improving the entire economic system in the present stage. The time and abilities exist to achieve it.

We find ourselves at the boundary between the 10th Five-Year Plan and the 11th, which is to be drafted so as to take these requirements into account. This is to be the point of departure of planning agencies and economic entities, which have begun to prepare the draft of the plan for economic and social development in the 1981-1985 period.

It is only on the basis of a 5-year plan that is internally consistent for each year and is stable in its principal assignments that all the economic levers and incentives can operate fully, that cost-accounting initiative of enterprises and construction organizations can develop, that socialist competition can become more effective in the formation of counterplans, and that economic motivation to draft strenuous annual plans can increase. The responsibility of ministries, associations, enterprises and construction organizations for fulfillment of the 5-year plan will be greater. The changes to be made in the system of indicators of the plan and criteria for assessment of the results of the economic performance of industrial enterprises and construction organizations will also help to make the 5-year plan more effective.

Strengthening of the Orientation of Planning Indicators and Performance Criteria Toward the Final Results of the National Economy

One of the key problems is to strengthen the orientation of the plan, its indicators and criteria for assessment of the results of economic activity in the system of economic incentives toward improvement of the final results of the national economy, i.e., toward fuller satisfaction of social and personal needs, high efficiency of work and of social production as a whole. Solving this fundamental problem of the party's economic strategy should be the orientation of the proportions and indicators envisaged in multiannual and current plans, measures to improve planning and management, policy in the domain of wages and prices, and other economic levers and incentives--in short, the entire economic mechanism or system.

All of this necessitates improvement of the economic system and a strengthening of the interaction of its several components. This approach is the basis of the decree which the CPSU Central Committee and USSR Council of Ministers adopted on 12 July 1979. At the same time a separate place should be given in the overall system of measures to the changes planned in the indicators of the plan and criteria for assessment of the performance of enterprises, which are to be the basis for making material and nonfinancial incentives, as well as the responsibility of enterprises and organizations, more effective. This is unquestionably one of the major questions dealt with by that decree.

In order to strengthen the orientation of enterprises in the industrial sector toward fuller satisfaction of the needs of society and personal needs, the role of indicators of output in physical terms will be considerably enhanced, and production associations (enterprises) will be motivated to fulfill mutual obligations for product deliveries as specifically detailed in the contracts concluded and will be accountable for doing so. The list of products planned is to be expanded in 5-year plans and especially in annual plans. Output in a product-group assortment, including goods for children, will be assigned in industries producing goods for the public. As a matter of fact in the annual plans of ministries, associations and enterprises the indicator of output in physical terms is being advanced to the first place

among the targets assigned. This change is closely bound up with enhancement of the role of the contract and assessment of performance of associations and enterprises according to deliveries of products to consumers in accordance with the established product list (assortment).

Jointly with interested ministries and departments USSR Gosplan has been ordered to make the necessary changes in physical units of measurement of output (above all in metallurgy and machinebuilding) in 1979 and 1980, with a view to broader application of technical-and-economic indicators characterizing performance characteristics, quality and technical level of products. In machinebuilding, moreover, beginning in 1980 the transition is being made to planning the production of equipment according to a broader list in units of measurement that reflect more fully the productivity and other parameters of the equipment produced, while indicators in terms of tons are used only for computational purposes.

In the 5-year plan enterprises and ministries will be assigned an indicator of product quality--growth of production of products in the superior-quality category or some other indicator of quality used in the given industry. Requirements for the quality of products subject to certification and state standards are, moreover, being raised. Over the next 2 or 3 years outdated standards for machines and equipment are to be revised, and the drafting completed of comprehensive programs for adoption of standards pertaining to the most important types of consumer goods, provision being made in them for mutual adjustment of the requirements concerning raw materials, supplies, components and finished products.

A second very important direction for improvement of the system of planning indicators is correction of the adverse tendencies in use of gross value indicators of the volume of output and labor productivity in industry and capital construction.

This problem, as we know, has been widely discussed in planning agencies and economic entities, as well as in the press. In view of the discussions that have been held and the experience of the other socialist countries, it has been deemed indispensable to make the transition in the industrial sector, above all in the manufacturing industries, to application of the indicator of net output in planning the growth of production, labor productivity and the wage fund. Attention has, moreover, been paid to the fact that because of great differences in profitability of articles, enterprises and industries, differences that are inevitable in the future as well, it is more expedient to use normative net output (adjusted net output or the value of processing). Experience in applying this indicator at approximately 800 industrial enterprises confirms this conclusion. At the same time the present experience indicates the need to establish net output norms by industries. The State Committee for Prices has been ordered to set the norms of net output or the value of processing at the same time when it issues new wholesale prices.

Normative net output is a part of the price, and, just like the wholesale price, it should be set on the basis of average labor expenditures of the industry. In this case it reflects more accurately the newly created values per unit output in the relevant industry. In many cases the use in planning of actual net output achieved by a given enterprise does not reflect correctly the expenditures of labor (labor intensiveness) because of great differences in profitability, not uncommonly resulting from causes that do not depend on the enterprises. Experiments in its use have not yielded the desired results.

When analogous products planned on the basis of normative output are manufactured, that enterprise at which the level of labor productivity is higher (other conditions being equal) will manufacture more products and will correspondingly increase the volume of net output. It is this which makes normative net output so important in planning labor productivity. This indicator reflects more accurately than other value indicators the change in the planned labor intensiveness of products. If an enterprise strives to include more labor-intensive products in the plan and to reduce those of low labor intensiveness, it will manufacture fewer products and risk nonfulfillment of the plan with respect to the other indicators, including profit, as well as nonfulfillment of obligations to deliver products to consumers. This has been confirmed by the experiments which have been conducted.

When normative net output is used, higher requirements apply to fulfillment of the production plan in accordance with the established products list, and no reduction of deliveries of assemblies or semifinished products under cooperative arrangements is observed. If we take into account that changes in net output do not depend on the specific proportion of material costs in the price of the product, it has great advantages over gross output or commodity output, especially in manufacturing industries which have a high relative share of material costs in the price of the product. Though the actual saving on material costs is not directly manifested in the volume of normative net output, it is reflected in profit, which enterprises have an economic incentive to increase. This motivation is enhanced when the rates are set for formation of incentive funds in percentages of profit (or calculated profit); these rates are to be set for the 11th Five-Year Plan.

A growth of normative net output reflects an increase in the given enterprise's contribution to the country's national income. The transition to normative net output creates a reliable basis for introducing the normative method in the planning of the wage fund, which in turn makes it possible to use the savings obtained to stimulate labor productivity. Consequently, use of this indicator is in line with the orientation toward raising the efficiency of operation and improving the quality of performance. Present experience demonstrates that when normative net output is used the enterprise experiences no serious difficulties in fulfilling the plan when output of new technology is being expanded or the quality of products produced is being increased, whereas difficulties of this kind are inevitable when gross indicators are used.

In industries of Group B which have a large assortment of products produced and experience difficulties in applying net output norms, it is more expedient to establish norms pertaining to the value of processing or, as this has now come to be called, norms of added value (the wholesale price minus the costs of raw materials, supplies and the value of components). In the extractive industries or other industries with relatively low material costs commodity output close in its structure to the normative value of processing can be successfully applied.*

In accordance with the decision that has been made, in the construction sector the transition will be made to planning labor productivity on the basis of normative net output or adjusted net output during the 11th 5-year period, after the necessary set of estimate norms has been prepared. On this basis it will be possible to work out a norm per ruble of net output to plan the wage fund, which is especially important in capital construction.

Along with these measures it is very important to improvement of the planning of labor and its productivity for ceilings on the number of workers and employees and assignments for reduction of the use of manual labor to be included among the assigned indicators. An analysis of the present procedure for assigning planned targets concerning labor has shown that enterprises make provisions in their plans for a work force which in the industrial sector as a whole and construction is considerably larger than the possible growth of labor resources and also the projections in the national economic plan. This detracts from the effort to raise labor productivity. The unfavorable demographic situation in the near future should be taken into account in assessing the advisability of assigning these indicators.

So that plans will reckon more fully on the economic benefit from application of new technology, provision has been made to assign indicators for the effectiveness of scientific-technical measures implemented along with other indicators pertaining to science and technology.

In the preparation of recommendations concerning improvement of planning indicators there has also been widespread discussion of the question of using the indicator of sales. Many practitioners and scholars have noted its shortcomings, including unjustified difficulties experienced by a number of supplier enterprises because consumers are not punctual in paying for the products they have delivered. This issue can now be regarded as solved. The volume of sales will be assigned in annual plans to production associations (enterprises) for purposes of evaluation of performance of obligations concerning deliveries of products in accordance with the list (assortment) as set forth in the contracts concluded. This means that emphasis is being put on performance of obligations related to delivery of products to consumers. The level of overfulfillment of the sales plan will for all practical purposes not be taken into account in the system of economic incentives of

* By contrast with the normative cost of processing used in the garment industry, it includes profit.

enterprises. Sales thereby becomes a kind of form of expression of deliveries of products to consumers in accordance with the list.

As for correcting the difficulties experienced by suppliers because of tardy payment for their products by consumers, this issue is being solved by adoption of a new payment procedure. If a purchaser experiences a temporary lack of funds, bills he has accepted are to be paid by banks by issuing the purchaser a loan which is to be repaid within 60 days and to which a higher rate of interest will be applied. Punctual payment of accepted bills will thereby be ensured, and at the same time purchasers will become more responsible in settling accounts with suppliers.

The kind of indicators used in evaluating performance of enterprises and in administering economic incentives, including bonuses, is just as important to the orientation toward the final results of the national economy as the change in the indicators assigned. In the industrial sector this assessment will be made primarily on the basis of performance of obligations concerning product deliveries as specified and by the dates envisaged in contracts concluded, and also on the basis of indicators of labor productivity, product quality, and the growth of profit (and in certain industries--reduction of production cost). Indicator of activation of production capacities and projects is being emphasized in evaluating the performance of construction and installation organizations and in administration of their economic incentive system. At the same time the results of fulfillment of the plan for the commodity output of construction, the rise of labor productivity and profit will also be taken into account.

Beginning in 1980 a number of new indicators may be adopted or their use expanded. The entire system of indicators will be introduced as an interrelated system in the 11th Five-Year Plan. It is important that the orientation of all industrial and construction ministries, enterprises and organizations toward a considerable improvement of the final results of activity from the standpoint of the national economy is to be strengthened on the basis of application of the new indicators and high requirements concerning efficiency in the draft of the plan for the 11th 5-year period.

Development of Planning Methodology and Methods

On the basis of the abundant and diverse experience in the organization of planning and in planning methodology and also on the basis of Lenin's doctrine of the principles and methods of drafting unified national economic plans the decrees which have been adopted have taken a new step forward in developing planning methodology. This is reflected above all in the strengthening of the social orientation of plans and in enhancement of their role in carrying out the party's economic strategy. As already pointed out, the multiannual aspect of solving major national economic problems and the importance of the comprehensive method in planning and analyzing the problems of economic and social development are being considerably strengthened. It is also very significant that the measures envisaged to improve the system and methods of centralized planning are being combined with a further

reinforcement of democratic principles in planned management of the national economy. This makes it possible to count on a fuller discovery of potential for a growth of production and for higher production efficiency.

The measures planned are aimed at improving the drafting and enhancement of the interaction of all types of plans from top down, which signifies a development of the Leninist principle of the unity of the statewide plan, within whose framework there is to be still greater linkage of the plans of the union republics, industries and the national economy, and all associations, enterprises and organizations.

Development of planning methodology is also manifested in the improvement and strengthening of the role of its most important methods: special-purpose programs, normative planning and planning with balances. As we know, comprehensive programs were drafted even in the past. They were used both to solve major scientific-technical problems and also to perform many tasks in economic and social development. In recent years, for example, programs were drafted to develop the Nonchernozem Zone of RSFSR, for the production of up-to-date computer equipment, for environmental protection, for development of nuclear power, for the health system, etc. The method of planning by objectives is to be expanded in planning the development of science and technology. More than 200 such programs were drafted in the 10th Five-Year Plan.

The importance of the comprehensive programs increases with each succeeding 5-year period. This was pointed out by L. I. Brezhnev in his addresses at the 24th and 25th CPSU congresses. What is new in the decree that has been adopted consists primarily of the fact that the task has been set of drafting an interrelated system of comprehensive scientific-technical, economic and social programs, as well as programs for development of individual regions and regional production complexes as a most important part of multiannual state plans of economic and social development. These programs are to be linked to the relevant sections of the plan and to material and financial resources. In other words, the optimally necessary number of programs, which are a most important part of multiannual state plans, should be drafted. No later than 1.5 years before commencement of each successive 5-year period USSR Gosplan, in agreement with interested departments or union republics, is to approve the list of necessary programs and the procedure and deadlines for their drafting. For the immediate future plans have been made to draft first programs covering fuel and metal conservation, reduction of application of manual labor, development of the BAM [Baykal-Amur Trunk Rail Line] zone, and growth of production of new consumer goods.

The procedure that has been established for drawing up the special-purpose programs will make it possible to avoid the narrow sectoral approach and to implement a comprehensive solution to major national economic, intersector and regional problems, which is one of the priority directions for improvement of management of the economy. The comprehensive programs, which are an important means of scientific substantiation of plans, at the same time figure as a method of organizing their fulfillment. For example, solving the

problem of fuel conservation requires in addition to planning targets and norms a set of organizational and economic measures at various levels of administration. They can be adequately coordinated and successfully implemented only by the method of the special-purpose program. The situation is much the same with the program for metal conservation.

Until recently proposals for conservation of fuel and metal were drafted within individual industries and enterprises. Now the task is to prepare statewide programs as an integral part of multiannual plans for the country's economic and social development. By means of these programs capital investments for measures related to metal and fuel conservation can be determined correctly in plans considerably more effective than outlays for construction of new enterprises to produce the relevant amount of resources.

Or let us take the planning of the growth of the production of new consumer goods. By virtue of the steady increase in the effective purchasing power of the public in the socialist countries, the market cannot develop solely by increasing the output of traditional consumer goods, though that is also indispensable. The assortment of personal consumer goods, especially housewares and durable consumer goods, should be constantly renewed on an ever greater scale. This means that plans must pay more attention to expansion of the assortment of goods not only within the limits of individual enterprises, industries and regions, but also on the scale of the entire country. This is also made imperative by the expansion of intersector relations and the need to solve certain problems on a centralized basis, such problems, for example, as the importation of equipment that is lacking or individual types of raw materials and the construction of specialized new enterprises.

The role of planning by objectives has grown considerably in the planning of scientific-technical progress. Along with the comprehensive program of scientific-technical progress, the decree which has been adopted to find ways of improving the drafting of intersector and intrasector programs pertaining to major scientific-technical problems. For instance, the procedure whereby the State Committee for Science and Technology and USSR Gosstroy draft programs for solving the most important scientific-technical problems and also problems for comprehensive use of natural resources so as to take into account the results of basic and applied research is to be improved. Whereas in the past the measures outlined in the program were usually limited to building the first prototype, i.e., mainly to coordination of the organization and financing of scientific research and development, now matters have been so arranged that the programs anticipate the final goals and technical-economic results, as well as the deadlines and stages of project performance, beginning with scientific research and ending with the practical application of its results, including the organization of series production of the new product and application of the progressive technology.

The role of intrasector programs has also increased. For example, ministries and councils of ministers of union republics are to draft programs for solving sectorwide scientific-technical problems along with appropriate

measures to create, put into production and apply high-quality new machines and equipment, progressive technology and materials, and also to improve the quality of products produced. The programs are thereby becoming a most important part of the plan for raising the technical level of the sector, which has the central place in sector planning. Inclusion of assignments for performance of scientific-technical programs among the planning indicators assigned for new technology has been envisaged in order to make the programs more effective.

Of course, the planning method based on special-purpose programs does not solve all the problems of speeding up technical progress and of raising product quality. In addition to improving the methods of planning and material incentives, it is very important to improve the organizational structure of management and to establish more effective monitoring of the development and application of new technology and the manufacture of high-quality products. Accordingly, we should make a separate note of the great importance of a number of measures outlined by the decree: completion over the next 2 or 3 years of the formation of production and scientific-production associations, along with greater specialization and cooperation within them; adoption of stricter requirements in state standards; regular assessment of the technical level of machines, equipment and other industrial technology produced; evaluation of technical-and-economic indicators of products manufactured and those to be put into production by experts from outside the department, and also enhancement of the role of other forms and methods of monitoring the technical level and quality of products produced.

The scientific soundness of the multiannual programs and plans of economic and social development which are drafted is largely determined by the quality of the norms and standards used in planning. USSR Gosplan has been ordered to develop within 6 months a system of progressive technical-and-economic standards and norms pertaining to types of operations and expenditures (economies) of labor, raw materials, supplies and fuel and energy resources, standards relating to utilization of production capacities and specific capital investments, as well as the procedure for their drafting and adoption. Moreover, not only are specific norms or standards to be improved, but also a broader system of progressive norms and standards is to be created which would be subject to regular revision so as to take into account scientific-technical advances and also changes in the volumes and structure of consumption of products. Only on the basis of this kind of system of standards and norms is it possible to complete during the 11th Five-Year Plan, as intended by the decree, the introduction of computerized planning computations along with extensive use of physical and value balances of the production and distribution of products, production capacities and labor and financial resources. This will open up the practical possibility of drafting plans in several variants and selecting the optimum plan from among them.

Improvement of norms and standards is an indispensable prerequisite for organizing planning on the basis of economic and engineering computations. This requirement must be met at all levels of administration, including

associations and enterprises. At the same time it is quite important for ministries to be punctual in preparing the passport of every production association (enterprise) including data on the existence and utilization of production capacities, on the organizational and technical level and on production specialization, along with other technical-economic indicators. When we add to this the more vigorous participation of work collectives in the drafting of 5-year and annual plans and in the exercise of control over their fulfillment, as well as the favorable new opportunities for development of socialist competition in the form of counterplans, the advantages of the procedure proposed, which does not allow planning assignments to be established solely "relative to the base" or on the basis of the pace up to that point, as was frequently the case, become obvious.

Consistent realization of all the measures outlined by the decree creates the organizational prerequisites and incentives for enterprises and ministries to compile strenuous and optimum plans. This will be promoted by enhancement of the role of the 5-year plan in the economic activity of every enterprise and its drafting of an annual plan on the basis of the assignments of the 5-year plan for the relevant year; by the transition to planning on the basis of a system of progressive norms and economic and engineering computations; and by improvement of the internal consistency of 5-year and annual plans.

Solving the task set by the 25th CPSU Congress of improving the internal consistency of plans is one of the main conditions for their successful fulfillment. More than that, it is one of the basic prerequisites for increasing the effectiveness of the economic mechanism, including stable economic norms such as, for example, the norm of wages per ruble output or the rate applied in the distribution of profit. A plan which is not internally consistent detracts from the effectiveness of economic incentives and contractual relations and should not in principle be submitted to policy-making bodies.

A system of measures has been outlined to ensure reliable internal consistency of plans; their performance is one of the priority tasks of all planning agencies and economic entities. It has been proposed that the practice of compiling material balances and plans governing the distribution of products among organizations disbursing allocations be raised to a higher level. When the main lines of economic and social development are worked out for the 10-year period, physical balances are to be compiled for the most important products, and the main lines of their use are to be defined for the final years of the 5-year period. Along with physical balances for each year of the 5-year period, the 5-year plan will depart from present procedure in its inclusion of plans governing distribution of products among principal organizations disbursing allocations. Physical balances are compiled in annual plans on the basis of the detailed product list, and the plans governing distribution are to be compiled covering all disbursing organizations.

Given the dynamic development of the economy and the faster rate of scientific-technical progress, the needs of the economy for material resources are changing constantly. A systematic study needs to be made of these requirements product by product. In solving this problem a larger role is being played not only by planning agencies, but also by USSR Gosplan and sectoral ministries, which in addition to the balances are to draft measures to overcome "bottlenecks" and to make timely provision for needs as they arise. The responsibility for satisfying the needs of the national economy and the public for products in the necessary assortment and of the necessary quality is borne by the ministry which is the principal producer of the given product.

The role of the production association (enterprises) is also being enhanced in timely and full satisfaction of the needs of the national economy and the public and in fulfillment of mutual obligations related to product deliveries in the specific assortment. To that end the conversion to direct long-term business relations of production associations and enterprises, including conclusion of contracts among them and also between production associations (enterprises) and agencies of USSR Gossnab, transportation and trade organizations for the 5-year period, is soon to be completed. In the drafting of annual plans the products list will be set forth in detail and revised no later than 1.5 months before commencement of the year.

Development of manufacturer's outlets and conclusion of 5-year agreements between state trade organizations and industrial associations calling for renewal of assortment, improvement of the quality of goods and other obligations related to fuller satisfaction of public demand will have great importance in raising the level of planning of the production of consumer goods and ensuring the necessary correspondence between the growing demand of the public and the growth of commodity resources. Contractual relations between wholesale depots and retail trade enterprises are assuming ever greater importance.

One of the directions for improving planning, as pointed out at the 25th CPSU Congress, lies in achieving more optimum combination of sectoral and regional development. This is dictated by the fact that economic growth in the union republics, oblasts and cities and the formation of a large number of major regional production complexes have increased requirements for regional planning and have intensified the need for more clear-cut coordination of the activity of sectoral management agencies and planning agencies in solving major regional problems, above all the planned development of a number of regions in Siberia and the Far East. On the basis of these tasks measures have been outlined whose performance will be conducive to the comprehensive economic development of the union republics, economic regions and oblasts and cities.

At the same time a number of measures have been aimed at achieving better linkage of the plans of enterprises and construction organizations under union and union-republic jurisdiction with the available labor and material

resources and also the needs of the general public. Very important among them will be placement of responsibility on councils of ministers of union republics and autonomous republics and on executive committees of local soviets to compile and approve summary plans for the production of local building materials, consumer goods, the drafting of plans for residential-utility and cultural- and consumer-service construction, as well as monitoring their fulfillment. Provision has also been made for compilation of regional balances of production and distribution of the most important products. Taking these balances into account, transportation ministries will determine the optimum freight flow patterns for large-volume shipments.

USSR Gosplan has been made responsible for drafting a program to solve major regional problems and to shape and develop the most important regional industrial complexes. In view of the growing importance of the regions of Siberia and the Far East in the country's economy, there are plans to work out patterns for the development and location of the productive forces of these regions and the regional industrial complexes within them, as well as the principal indicators of economic and social development for each complex. These schemes and indicators will be examined and approved by USSR Gosplan.

Performance of these measures to improve planning is to begin in the 10th Five-Year Plan. Some issues may be resolved in the plans for 1980. At the same time USSR Gosplan, central economic departments, USSR ministries and departments and ministries and departments of the union republics have a great deal of work ahead of them in preparing all the necessary conditions, standards and documents concerning methods so that all the measures envisaged by the decree adopted by the CPSU Central Committee and USSR Council of Ministers on 12 July 1979, whose purpose it is to substantially raise the level of planning work in the national economy and above all in industry and capital construction, begin to be implemented in an integrated and complete way in the 11th Five-Year Plan.

Production associations, enterprises and organizations will themselves have a great deal to do in carrying out this decision. They are to compile drafts of 5-year plans for the 1981-1985 period on the basis of the new principles set forth in the decree which has been mentioned, and work collectives are to be extensively involved. Potential that exists within the production entity should be revealed more fully in these drafts, and the principal emphasis should be put on efficiency and quality and achievement of higher final results of the national economy's performance than in the 10th Five-Year Plan.

Improvement of the quality of our plans and comprehensive development of the creative initiative of work collectives in drafting and carrying out plans are powerful tools for successful realization of the economic strategy worked out by the Communist Party.

7045
CSO: 1820

COMPUTERS TO BE USED INCREASINGLY IN ECONOMIC PLANNING

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 11, Nov 79 pp 16-24

[Article by N. Lebedinskiy, Deputy Chairman of USSR Gosplan: "The Development of National Economic Planning and the ASPR [Automatic System for Planning Calculations]"]

[Text] Planning is one of the main advantages of the socialist system of economic activity and a basic lever for economic management under socialism. In our country planning has trod a great and glorious path, at all stages of which it has been a most important form for realizing the party's economic policy. The development back in the first years of Soviet power of quarterly and annual plans for the production and distribution of the most important types of output, the creation of the first integrated long-range plan--the GOELRO [State Commission on the Electrification of Russia] plan, and conversion to the systematic compilation of five-year plans for developing the national economy--all these were consecutive steps on the road to establishing and developing planning management of the economy. Thus the proposition that socialism is the "planned organization of the social-production process for providing for the welfare and all-around progress of all members of society...,"* which was recorded in our party's first program, has been translated into practice.

Having substantiated scientifically the necessity for the planned operation of the socialist economy, V. I. Lenin set the basic principles for planning supervision of the national economy, primarily the principles of direction by the party, management by directive, democratic centralism and the scientific validity of plans. More than 60 years of experience in building socialism and communism in our country and the successful execution of radical socio-economic transformations in socialist countries testify convincingly to the great vital strength of Leninist planning principles.

*"KPSS v rezolyutsiyakh i resheniyakh s"yezdov, konferentsiy i plenum Tsk" [The CPSU in Resolutions and Decisions of Congresses and Central Committee Conferences and Plenums]. Moscow, Politizdat, 1970, p 61.

In the modern era the role of planning and the requirements made on it are increasing considerably because of the new magnitude and nature of our economic activity, the problems of providing for all-around growth in the people's welfare, and intensification of social production and a rise in its economic effectiveness, based upon a union of the achievements of the scientific and technical revolution with the advantages of the socialist system of economic activity. The party has set the main directions for improving national economic planning on that basis.

On 12 July 1979 the CPSU Central Committee and the USSR Council of Ministers adopted a decree, "The Improvement of Planning and Intensification of the Action of the Management Mechanism to Raise Production Effectiveness and Work Quality," which increasingly aims the whole management and planning activity at raising the effectivness and quality of work, achieving high final national-economic results, and satisfying rising social and personal demands more completely. "The task consists," it is pointed out in the decree, "in raising the level of planning and economic activity, to bring them into accord with the requirements of the modern era--the era of developed socialism, to achieve a substantial rise in the effectiveness of social production, an acceleration in scientific and technical progress and growth of labor productivity, and an improvement in the quality of output, and, based thereon, to provide for a steady uplift of the country's economy and the welfare of the Soviet people."

An improvement of all planning work, the selection of more effective ways for achieving high final national-economic results, a rational combining of the development of branches of the economy, of regional development and of long-range and current plans, an improvement of interbranch and intrabranch proportions, and provisioning for balanced growth in the economy are the most important areas for achieving this party goal.

A systematic approach to implementing the main trends for improving planning that the party contemplates presupposes comprehensive development of the methodology, procedures and the scientific and technical base of planning. In so doing, the system of plans is improved, the quality of existing state plans is raised, new chapters are introduced into state plans, and the system of planning indicators is improved. As a result, the number of economic planning problems that are solved in the process of compiling plans and in monitoring their fulfillment is greatly expanded. These problems are becoming urgent, and it is impossible to solve them with high quality and on time with traditional methods. These problems include, in particular: the development of complicated socio-economic forecasts, the role and importance of which are being intensified because of an expansion of the planning horizon; the choice of the best options for developing and siting production facilities; and the mutual correlation and coordination with high precision of a large number of production inventories and the distribution of output, taking into account not only direct but also indirect ties within the economy, and so on. Special methods of mathematical economics, which were designed on

the basis of the use of high-capacity electronic computing equipment, have been developed to solve these problems.

Simultaneously, the demands made on the substantiation of and deadlines for solving traditional planning tasks are growing. They should be resolved for a more complete output mix and with greater precision and responsiveness, taking into account a larger number of factors and functions, in mutual correlation with newly mastered tasks.

An expansion in the number and a rise in the qualitative level of the economic-planning tasks that are being resolved is linked with a sharp increase in the volume of information that is subject to processing during the compilation of plans and the monitoring of their fulfillment. This leads to the emergence of a contradiction between an expansion of the structure and a complication of the content of economic-planning tasks and the practical impossibilities of processing the information in planning organs. It is obvious that this contradiction cannot be resolved under modern conditions through a simple increase in planning-organ staff manning or in an extension of worktime on the plan. The extensive route for development has practically exhausted itself not only in social production but also in the sphere of planning and control. An intensification of the processes of planning on the basis of the newest achievements of economic theory, cybernetics, electronics, and computer technology is the only correct route for solving the planning problems that have matured. USSR Gosplan and the union-republic gosplans are implementing this by the creation of an automated system for planning computations--the ASPR--and the introduction of other technical means for the scientific organization of the labor of planning workers.

The ASPR is an automated system for calculating state plans and for monitoring their fulfillment, where the application of modern methods and equipment for the processing, transmission and representation of information, with the appropriate technology and organization of operations and of personnel, has been developed. It is intended for performing within the prescribed periods multivariate computations for designs for national-economic plans, with the comprehensive correlation of each variant and the optimization of plan solutions. By means of the ASPR, a unity of the processes of developing plans and of monitoring their fulfillment at the national-economy, branch-of-the-economy and regional levels is achieved.

The ASPR is being established as an organic part of the system for national economic planning. The theory of socialist planning acts as the methodological base and existing practice in developing plans as the starting point for synthesizing plans. In this case, the ASPR proceeds from the necessity for radically improving the existing system of planning through the opportunities opened up by the use of EMM's [methods of mathematical economics] and EVT [electronic computing equipment]. Thus the ASPR is a system that is open and is being developed continuously. This means that as individual ASPR elements are developed and readied, they are introduced into experimental and then into actual operation and

they begin to function in the development of regular current and long-range plans, gradually displacing the corresponding traditional elements of planning technology. The sequence and scale of this process are determined by the phases for creating the ASPR, which are calculated at 5-6 years.

As of now, the first phase of the ASPR, which includes the general theoretical bases of the system, the set of economic-planning tasks that are to be executed, and a set of system-wide support resources, has been completed, and the necessary design and operating documentation exists.

From the procedural point of view, the draft ASPR design has the central place in making up the first phase. The theoretical bases and the technology for preparing and for checking on the fulfillment of long-range and current plans, making wide use of modern methods and equipment for processing, transmitting and representing information, have been developed for it, based upon a generalization of socialist-planning experience and taking into account the newest achievements of science and technology in an integrated and objective fashion. The draft solutions that have been adopted and partially realized in the system's first phase have been aimed at bringing to life the improvement of planning that the party contemplated.

An expansion of the horizon for planning and a conversion to the compilation of a single system for long-range, medium-range and short-term plans require improvement in the organization and technology for developing each type of plan and all of the plans in mutual correlation. It is known that the periods when planning organs have to work simultaneously on the next year's plan, the next five-year plan and long-range plans are especially strenuous. Therefore, flow charts and chronograms for USSR Gosplan preparation of a system of plans that envisions a more uniform workload for planning workers over the years of the five-year plan have been worked out and validated in detail in the draft design of the ASPR and the contract designs for the functional systems. In so doing, methods are contemplated that will enable timely and high-quality preparation of draft plans to be provided for, through use of the potential opened up by the application of highly productive methods for solving planning problems.

Within the first phase of the ASPR of USSR Gosplan and the Union-republic gosplans are more than 3,000 economic-planning tasks that are solved by means of electronic computers during the development of long-range and annual national-economic plans. The computations that are performed in so doing provide for an increase in the scientific validation and in the balance of plans as well as a growth in the labor productivity of planning workers, their procedural arsenal is being expanded, and the machine method of producing planning documents is provided for. In USSR Gosplan alone about two-thirds of planning documents, involving practically all the combined ASPR subsystems, are being produced directly on computers.

Much work has also been done to develop the first lines of ASPR's for the Union-republic gosplans, which include more than 2,200 tasks that are solved by means of computers during the development of plans and the monitoring of their fulfillment.

The necessary support (procedural, mathematical, informational and other) has been developed that will permit realization of a whole complex of economic-planning tasks by the first-phase ASPR at both the USSR Gosplan and the Union-republic gosplan levels and will create conditions for a buildup in support with regard to both quantity and quality. A technical base for national-economic planning has been established within USSR Gosplan's TVTs [Main Computer Center] and the Union-republic gosplans' VTs's [computer centers].

Work has been done to train personnel of the central USSR Gosplan staff and the central staffs of the Union-republic gosplans in operating with computers. About 2,000 planning workers have passed a system of special instruction. The study of ASPR problems has been introduced into the syllabus for students of the Academy of the National Economy and the Control Institute under it. During the period 1971-1976, 8,162 planning-organ specialists completed the Higher Economics Courses under USSR Gosplan. During this same period 7,182 planning workers in the Union republics went through retraining.

Thus, upon introduction of the first phase of the ASPR, the organizational and procedural bases for the design and introduction of the ASPR's had been established and the necessary cadres of development workers and specialists in USSR Gosplan and the Union-republic gosplans had been trained. All this is a good base for further work that will be conducted within the framework of the second phase of the ASPR.

However, it was not possible during creation of the first phase to surmount certain difficulties and inadequacies. Such as these: the self-contained nature of the problems solved; the lack of integrated correlation of the problems within subsystems and between them; incomplete procedural, informational and organizational compatibility of the tasks solved in the subsystems; and the lack of an automated data bank and intermachine information exchange between systems.

A principal feature of the second phase of the ASPR consists of a substantial rise in the effectiveness of the system through an amalgamation of planning tasks that are being solved within the ASPR, with the wide use of EMM's and EVT, and the integration of state plans for economic and social development that are being worked out, based upon the organization of interaction, on the one hand, between various ASPR levels, and, on the other, between ASPR subsystems and ministry and agency ASU's [automated control systems].

The course adopted for creating the second ASPR phase involved a change in procedures, technology and organization of the development of plans. The role of consolidated computations and of planning computations for

the long term is being intensified, the variateness of the plan solutions that are being examined is being heightened, and the requirements for quantity and quality of the information that comes to USSR Gosplan from outside sources are rising. The role of plan projections that are being made in USSR Gosplan is being raised. All this taken together predetermines change in all the component elements that characterize the interaction of the ASPR with the ASU's of branches of the economy and of agencies.

Reflection in the planning system of current and long-range aims for social and economic development and provisioning for more complete satisfaction of final social requirements present rising demands on the proportionality of plans and use of balances in their chapters and indicators. The main route for solving these problems is to develop and use increasingly widely the standard-balance method of socialist planning. The prerequisites for realization of this approach are being created in ASPR by the development and introduction of interindustry balances, centralized computations of the requirements for material resources, and automation of the formulation of a system of progressive norms and standards.

The use of interindustry-balance models will enable improvement of substantiation of consolidated indicators, synthetic proportions and pace of growth of national-economic development over the long term and quantitative evaluation of the national-economic consequences of various options in structural policy in the areas of distributing national income to consumption and to accumulation, the structure of capital investment by branch of the economy, and the distribution of labor resources by sphere and branch of the national economy. At the same time, interindustry balances will enable national-economy balance indicators to be correlated more closely with the indicators for the system for particular material balances.

The potential opportunities of the interbranch balance are still being used far from completely. But, as a result of the introduction of the first phase of the ASPR, the use of interbranch models will enable a consolidated section for long-term planning to carry out in a short time at the initial stage of plan development a large number of variate computations of the pace and proportions of national-economic development for a cross-section of 18 branches of the economy and 260 types of output. These calculations will enable an evaluation of various hypotheses about the social and economic development over the long term and a study of the influence of planned indicators of the effectiveness of the various branches (intensiveness in the use of materials, capital and labor for output) on the growth of social production and the satisfaction of final social requirements. Such calculations were carried out for the first time during development of the 1976-1980 plan and are now being used to prepare the main directions for developing the national economy up to 1985 and up to 1990. During the second phase of the ASPR the interbranch balance method should be disseminated still more widely.

Centralized computations of the requirements for material resources plays an important role, along with interbranch models, in raising the state of balance of plan projections. The development and introduction within the framework of the first phase of the ASPR of the set of calculations of the requirements just for metal output provided for unity of procedural, informational and organizational resources in the work of almost 20 USSR Gosplan sections during the development, in interaction with 83 ministries, agencies and Union-republic gosplans, of drafts of annual plans for the USSR's economic and social development.

The unified nomenclature for the products of machinebuilding, metalworking and consumer goods that was adopted for USSR Gosplan, the USSR Central Statistical Administration and the main capital holders numbered more than 9,000 specified items. The amounts of production of output in kind and in terms of cost, the norms for consumption and the requirement for material resources for the production thereof are determined in accordance with this products mix, taking wholesale prices into account. The volume of standards information for the 14 most important types of metal and pipe alone, when calculated on computers for the draft annual plan, will be more than 130,000 consumption norms, and the total volume of reprocessed information will be about 3 million symbols.

Because of this, the process of developing the plan for supplying materials and equipment has been changed radically in both USSR Gosplan and the ministries and agencies, the quality of standards information has been improved, and responsiveness in making calculations where they are multivariate has been raised.

The calculation of material-resources requirements on the computer has enabled the standards method to be used more widely in planning practice; the precision of the computations carried out has been improved; and conditions have been created for correlating indicators for requirements with contemplated production-output volumes, in kind and in terms of cost. This has enabled a rise in the use of balances in the plan for supplying materials and equipment and in the effectiveness of distribution of the most important resources in social production.

The second ASPR phase calls for an expansion severalfold of the list of types of metal products for purposes of computation of requirements, and the experience gained in solving problems in determining requirements for chemical output, construction and forestry materials, fuel and power resources, and various types of equipment, and so on will be disseminated.

Intensification of the work on balances will require a radical improvement in the standards base for planning. It is through a system of progressive norms and standards that it is possible to reflect in all chapters and indicators of the plan the effect of scientific and technical progress on social production effectiveness. For this purpose, the Integrated Automated System for Material, Labor and Financial Norms and Standards [ASN] is being created for the development of current and

long-range plans for the economic and social development of the USSR. It includes a list of the agreed products mix, norms and standards and the procedures for their formulation, approval, use and updating by planning level, and it also defines the procedural principles for computing these norms and standards with the use of computer equipment.

The first phase of the system mentioned should include norms for the consumption of material resources for the assimilation of design capacity, for labor expenditure, for determining the requirements for equipment, for planning capital investment, and for financing. Formulating them with the use of computers provides for the creation of a comparable standards base for the ASPR, OASU's [branch automated control systems] and ASUP's [automated systems for the control of enterprises].

Provisions for using balances in plan projections is a necessary but not a sufficient condition for the effectiveness of design solutions. The party guides planning organs to the development of plans in which achievement of the planned social and economic goals will require consumption of the least material, labor and financial resources. Major opportunities for solving this task are being opened up by the use of models and methods of optimal branch and interbranch planning.

For example, USSR Gosplan's GVTs and other organizations will, in accordance with models, perform computations for optimization of the development and siting of production facilities for 15 years. Tasks for the first ASPR phase included tasks for optimizing the development and siting of facilities for the production of cement, mineral-fertilizer, plastics and chemical-fibers industries, for oil-refining industry enterprises, and for other activities. Planning practice has proved that the solution of optimization problems will help to raise the effectiveness and quality of planning decisions: in some cases their realization will reduce calculated costs by 10-15 percent in comparison with the variants of plans compiled by traditional methods.

It must be said, however, that, as a consequence of the appearance of bureaucratic tendencies, the pace of introducing optimizing computations into planning practice is still low, despite the existence of officially accepted models and the required computer equipment.

An indispensable element of planning work is the monitoring of plan fulfillment. In the modern era, while the plan is being executed, provisions should be made for converting from the passive recording in some cases of discrepancies between the report and the plan to active action. The economy's development must be guided continuously in the planned channels, reducing to a minimum the deviations that arise (sometimes by virtue of objective factors). For this purpose, trends that appear should be analyzed, reserves should be revealed, and recommendations should be developed concerning ways and means of influencing the course of economic processes with a view to bringing them into correspondence with the planned design. Conversion to such active forms of monitoring is impossible without the use of especially sensitive and precise

forecasting methods and modern computing equipment and means of communications. The flows of information between USSR Gosplan, USSR Central Statistical Administration and ministries and agencies that are necessary for effective monitoring over the course of plan fulfillment have been defined in ASPR solutions. In order to implement these solutions, the second ASPR phase calls for the arrangement of close mutual interaction of the ASPR and the ASGS [Automated System for State Standardization], based on their joint technical, mathematical and informational software resources.

In solving the tasks of the first ASPR phase, various problems of organizing practical interaction of the system with external ASU's were worked out. At the same time, the conversion from self-contained tasks to internal subsystem and intersubsystem complexes, which will embrace tasks for various functional ASPR systems, poses the especially severe problem of organizing close interaction between the ASPR of USSR Gosplan and of the Union-republic gosplans on the one hand, with branch, agency and regional automatic systems for planning, control and information processing on the other. An important point in achieving the indicated purposes is the development and effective use of joint, systems-wide support resources, primarily procedural, informational, mathematical, technical and organizational

The more serious problems that determine in the greatest degree the nature and effectiveness of interaction of the ASPR with branch and agency ASU's should include methodological problems.

Automated systems belong to the class of systems that are being developed continuously; they are developed by phases; and each new phase multiplies and modifies the set of economic-planning tasks that are resolvable by means of automated systems. The nature of the interaction of the ASPR and the ASU's is improved here, especially its procedural aspect. The introduction into each phase of new methods and models for computing plans at the national-economy, agency and branch levels transforms, willy-nilly, the task of achieving procedural compatibility of automated systems into a dynamic task, that is, the conditions of procedural compatibility for the building and functioning of the ASPR and the ASU's must be linked with the level of development of each of the interacting systems that has been achieved or planned.

Automated systems for planning and control are created as an organic part of the overall system of planned management of the socialist economy. Therefore, the proposition about unity and centralization of procedures for planning remains true for them also.

Based upon this, ASPR procedures-design papers, primarily the draft design of the ASPR (the master book and the design for procedures support) should be viewed as documents whose procedural parts are distributed to regional, branch and agency ASU's. In this situation, the developers and users of the ASU's are not deprived of independence in solving some procedural questions of automation and planning. But preference is given to

those ASPR design solutions that provide for centralization of the planning process by the forming of a common nature of ASPR interaction with branches and agency ASU's during the development of national economic plans and the monitoring of their fulfillment.

ASU's, which should guarantee a potential for the responsive exchange of information between the computer systems of USSR Gosplan, ministries, agencies and Union-republic gosplans over channels of communication or on mechanical carriers should be established individually on the basis of the hardware. The correct policy of supplying Union-republic gosplan computer centers with electronic computers of a single series has now been adopted.

USSR Gosplan has taken steps to expand the base complexes that obtain computers. Prior to the end of the five-year plan 365 units of equipment will be installed at Union-republic gosplans; this will enable practically all their requisitions for the shipment of computer equipment to be satisfied. However, not by far does the computer equipment that has been supplied meet modern requirements, and the series output of domestic video terminal devices has not been arranged up to the present. The ministries that supply terminal equipment should speed up the delivery of our country's automated systems of highly productive peripheral equipment, mainly remote displays, that will enable the effectiveness of preparation of information for these systems to be raised and their interaction to be provided for.

More than 20 terminals associated with computers in an actual planning-operations regime are in operation within USSR Gosplan in the framework of the terminal information system (TIS) established in the GVTs.

The chief merit of the terminal information system, which was evaluated right away in a number of USSR Gosplan subdivisions, is responsiveness. For example, the time from the moment of introduction of the last correction to the start of the calculations is now only a few minutes, whereas the former technology required one or two days for this operation.

Thus, during creation of the second phase, the main trend of development of ASPR technical support should be the conversion of USSR Gosplan and Union-republic computations centers to third generation computers of the YeS EVM [Unified System of Electronic Computers of CEMA]. Simultaneously, USSR Gosplan and the Union-republic gosplans should be supplied with video displays of domestic production minicomputers, which have been called upon to become "smart" terminals.

Documentation for the second ASPR phase devotes serious attention to the problem of ASPR interaction with ministry and agency ASU's. Thus, a chapter, "Requirements for Interaction of the ASPR and the ASU's of Ministries and Agencies," has been assigned in the task for designing the documentation. This defines the main purposes, tasks and operating trends that should be implemented during organization of the design and the experimental refinement of paired interaction of the ASPR separately

with the ASGS of the USSR Central Statistical Administration, the ASU of USSR Gosplan, the ASU of Minvneshtorg [Ministry of Foreign Trade and the ASU of GKES [State Committee for Foreign Trade], the ASU of Minpribor [Ministry of Instrumentmaking, Automation Equipment and Control Systems] (ASUpribor), and the ASU of Minlegprom [Ministry of Light Industry].

The ASPR's interaction with the listed automated systems will be organized in accordance with running programs for interaction that have been approved in the established procedure. The running programs include concrete tasks, subsystems and modules for which the interactions should be worked out; work on all types of software for achieving the necessary level of compatibility; the deadlines for doing the work; and those responsible for carrying out the work.

The CPSU Central Committee and USSR Council of Ministers decree, "Improving Planning and Raising Production Effectiveness and Work Quality," calls for completion of the introduction of an automated system for planning computations during the Eleventh Five-Year Plan. USSR Gosplan faces the important task of providing, with the help of the ASPR, for variant development and optimization of planning decisions, for creating conditions for the wide use of in-kind and monetary-cost balances for the production and distribution of output, for production capacity, for labor and financial resources and for a system of planning standards. All this requires that work on introducing and developing the ASPR during the Eleventh Five-Year Plan be speeded up considerably.

One of the main problems in the given area is the creation of a centralized set of calculalations that should become the basis for the integration of planning tasks of the second phase of the ASPR. The prerequisites now exist and the required experience has been accumulated for creating the set, which includes computations of: commodity or standard net output by branch and agency; the national economy's requirement for the most important types of output; in-kind and monetary inventories of equipment; the introduction into operation of production capacity and of fixed capital; and the plan for capital investment, the labor inventory, exports and imports, and other items. These computations should be grouped around consolidated-cost models and detailed in-kind and monetary-value cost models, which should operate in interaction.

The creation of such a set will enable variate computations of the pace and proportion of development of the national economy with regard to the most important branches to be carried out in correlation with the plan for production output in kind, taking into account the inventories of material, labor and financial resources. In this connection, the role of USSR Gosplan's GVTs as the head organization for the design and introduction of the ASPR should be strengthened.

USSR Gosplan's GVTs, which is now observing its 20th anniversary, has become a powerful scientific-research and practices center in the matter of improving planning through the use of modern computer equipment and methods of mathematical economics. It has been incorporated into the USSR

Gosplan structure and the planning-operations process. These are all bases for asserting that USSR Gosplan's GVTs will later increase its role in developing the theory and practice of developing plans for the economic and social development of our country.

11409
CSO: 1820

MEASURES TO IMPROVE EQUIPMENT UTILIZATION SUGGESTED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 10, Oct 79 pp 110-117

/Article by D. Palterovich, doctor of economic sciences: "Ways of Increasing the Efficiency of Equipment Utilization"/

/Text/ One of the most complicated tasks in the area of increase in the efficiency of public production is connected with overcoming the tendency toward a decrease in the capital-output ratio, which has lasted for the fourth five-year period in succession and has even intensified in recent years. From 1960 through 1977 the capital-output ratio decreased in all material production (when calculated according to the national income) by 30 percent, in industry (according to gross output) by 19.4 percent, in agriculture (according to gross output), to more than one-third and in construction (according to the volume of construction and installation work), to almost two-fifths. In 17 years the average annual rates of decrease comprised 2.05, 1.25, 6.5 and 5.2 percent respectively and in 1971-1977, 2.55, 1.45, 7.1 and 5.1 percent.

To some extent the reduction in the capital-output ratio is due to the rapid growth of capital investments allocated for improvement in working conditions, protection of the environment and compensation of the process of depletion of natural resources. However, the structural and technical policy and also the mechanisms of planning and stimulationg aimed at the formation of an efficient production apparatus and optimization of its reproduction and utilization have a decisive effect on the tendencies of the capital-output ratio under the conditions of planned economy. In other words, the tendencies of the capital-output ratio should be controlled to the same extent to which all the basic parameters of national economic development are controlled.

The tendencies of the capital-output ratio depend on the rates of economic growth, because an increase in these rates contributes to a more favorable dynamics of the capital-output ratio. However, a feedback is also observed here. A decline in the efficiency of utilization of fixed capital has an unfavorable effect on the rates of growth, structure and efficiency of production.

A decrease in the capital-output ratio does not exclude the possibility of increase in the general efficiency of production, but it limits its rates and leads to an outstripping growth of production accumulation and the production of means of production in detriment to the production of consumer goods.

The level of equipment utilization is one of the key factors determining the dynamics of the capital-output ratio. The degree of loading of the power capacity of equipment is the most general characteristic of this level on the scale of industry or its individual sectors. The ratio of the annual expenditure of electric power in kWh on motive force and technological needs to the capacity of electromotors and electric apparatus in kW can be taken as an indicator of such loading. The indicated ratio gives the conventional number of hours worked by a unit of capacity in a year. The change in this indicator from the beginning of the 1960's in industry as a whole is reflected in table 1.

Table 1

	Throughout Years				
	1961	1966	1971	1975	1977
Number of hours of utilization:					
of electromotors	1694	1645	1583	1549	1474
of electric apparatus	3439	3157	2875	2913	2804

Thus, in 17 years the loading of electromotors was reduced by 13 percent and that of electric apparatus, by 18 percent. In machine building and metalworking the number of hours of operation of electromotors in the 1960's was reduced by approximately 10 percent,[1] then the loading was stabilized at a level of about 800 hours and in 1977 it totaled 762 hours.

The presented indicator reflects the level of equipment utilization both in terms of time and capacity. It increases when the shift coefficient rises, when idle time is reduced, when the share of machine time in all the work time increases and when the gap between the installed and actually utilized capacity is reduced, that is, when the unnecessary reserves of equipment capacity are lowered. Obviously, the task of improving these indicators of machinery utilization is not being solved satisfactorily.

The degree of extensive utilization of equipment can be judged by the shift coefficient, which, in particular in machine building, according to the results of statistical surveys, in the 1960's had the tendency to be lowered and during the first half of the 1970's was almost stabilized at the level of 1.3 for all metalworking equipment and 1.4 for the equipment of basic production.

The total amount of metal per unit of metalworking equipment consumed by the sector gives a certain idea of the utilization of equipment in machine building and metalworking. Calculations show that in 1965 it totaled 15.7

tons and in 1975, 13.9 tons, that is, it decreased by 11.5 percent despite the increase in the productivity of the manufactured equipment. At the same time, in 1965 a total of 25.6 tons and in 1966 a total of 26.1 tons of all types of metal per unit of equipment were consumed in the machine building and metalworking of the United States.[2]

In the textile industry with a growth in the volume and productivity of equipment the number of hours per unit of the pool worked in a year had the tendency to be lowered. The change in the annual number of hours of operation of looms in the basic sectors of the textile industry is reflected in table 2.[3]

Table 2

Sector of Textile Industry	1965 in % of 1960	1970 in % of 1965	1977 in % of 1970
Cotton	94.0	97.9	94.6*
Wool	84.8	109.3	88.7
Silk	--	--	82.3
Linen	--	--	98.0

*In the enterprises of the USSR Ministry of Light Industry in 1970-1975

The growth of output per machine was slowed down in construction. For example, from 1965 through 1975 the volume of excavation work carried out by subcontracting construction organizations increased from 4.6 to 12.2 billion cubic meters, that is, almost 2.7-fold,[4] and the pool of excavators, bulldozers and scrapers in construction, 2-to 2.1-fold, that is, every excavator accounted for 25 to 30 percent more excavation work. From 1975 through 1978 the increase in the volume of excavation work comprised (according to the plan) 115.4 percent,[5] whereas the pool of excavators increased by 15.5 percent, of scrapers, by 13.4 percent and of bulldozers, by 20.6 percent, that is, in practice, there was no increase in the volume of work per machine, although the pool was constantly replenished with more powerful and productive, new machines and the share of work carried out by dredgers increased. Obviously, the effect of growth of the productivity of machines was not realized owing to the decrease in the level of their utilization.

In the last few years statistics has noted a reduction in the number of hours of utilization of the average annual installed capacity of electric stations, increase in the idle time of blast and open-hearth furnaces, decrease in the average daily run of the locomotive and freight car in railroad transport and stabilization or a certain decrease in the average speed of movement of freight trains, sea and river vessels and so forth.[6]

Thus, improvement in industrial equipment, development of automated control systems and improvement in production organization only partially compensate for the effect of factors impairing the utilization of means of labor.

Investigations of the problems of utilization of fixed productive capital in national economic sectors are conducted on an insufficient scale and, usually, are limited to an evaluation of such indicators as the commissioning and withdrawal of fixed productive capital, share of their active part, periods of mastering new capacities, dynamics of the shift system and idle time of equipment, production regularity and effect of the enumerated factors on the loading of capacities and the capital-output ratio. The importance of an analysis of these indicators does not evoke any doubt. However, at present along with this, to improve the utilization of equipment, it is necessary to concentrate the efforts of economic and sectorial scientific research organizations on the solution of the following problems:

analysis of the combination and proportionality of development of all the elements of fixed productive capital; development of methods of detecting and eliminating disproportions in the structure of production capacities;

development of methods of analyzing and planning the need for and also the functional, technological, type-size and age structure of machinery and equipment;

determination of the spheres of rational use of machines, which must be indicated in their technical documents;

development of ways and methods of reducing disproportions between the increase in the size of the pool of equipment and the availability of manpower for servicing it on the basis of a rise in the level of mechanization and automation, disengagement of auxiliary workers, wide introduction of multimachine servicing and so forth;

analysis of social factors affecting the utilization of equipment; development and introduction at enterprises of methods of systematic or continuous control and check of the utilization of equipment with the allocation of new types of highly productive expensive equipment;

development of systems of incentives for enterprise workers for a high level of utilization of production capacities (on condition of fulfillment of planned assignments for the deliveries of output to customers);

preparation of methods and organizational forms of cooperation of enterprises in the utilization of equipment and flexible systems of its distribution and redistribution among consumers, including leasing machines in the necessary cases.

Thus, in our opinion, it is necessary to expand and deepen the investigations of factors in and reserves of increasing the efficiency of utilization of fixed productive capital, shifting the center of gravity to problems of formation of an efficient structure of the production apparatus and elimination and prevention of internal disproportions hampering the utilization of equipment and improvement in the mechanism of planning, stimulation and control of the reproduction and utilization of fixed capital. Special attention should be given to an analysis of the ways of improving the utilization of new equipment.

Let us examine some of the enumerated problems at greater length.

Comparatively not long ago most economists, as the main reason for the lower level of labor productivity as compared with the United States, pointed to its insufficient technical equipment and lag in the volume of production and size of the pool of many types of equipment. The situation has changed considerably in a number of sectors recently. The size of the pool of metalcutting lathes in the national economy of the USSR in 1972 was 1.4 times greater than in the United States and this gap has now increased. In the USSR there are now more forging and pressing equipment, excavators, coal combines, petroleum drilling rigs, cement mills and some other machines than in the United States.

As a result, in many sectors the increase in production efficiency is held back not by a shortage of equipment, but by its too big quantity under the conditions of significant disproportions in structure and insufficient utilization.

The effect of the structure of fixed productive capital on its efficiency is often interpreted in a one-sided manner. An increase in the proportion of the active part of fixed capital is considered a factor in the increase in the efficiency of fixed productive capital. However, first, the proportion of the so-called active part of fixed productive capital should be economically rational, not maximal. Second, the efficiency of fixed productive capital is affected not only and even not so much by the correlation between so-called active and passive capital as by the proportions between all the basic elements of fixed productive capital and some elements of circulating capital. Third, disproportions within the major elements of fixed capital, in particular in the structure of technologically combined machinery and equipment, play a special role.

Disproportions between interacting types of equipment--mobile power equipment and operating machines; machine tools or other machines and tools, equipment, supply sources and accessories; various types of machines operating jointly or in succession in a single technological flow--are especially intolerable. These disproportions sharply lower the efficiency of utilization of means of labor.

For example, in agriculture the increase in the pool of operating machines lags behind the pool of tractors. Especially significant disproportions arose in connection with the lag in the production of trailed operating machines for new powerful tractors, in particular the K-700 Kirovets, owing to which no more than one-half of their capabilities were utilized. The insufficient production of trailers for trucks had a negative effect on the efficiency of motor transport. The lag in the production of storage batteries, as a result of which up to 30 percent of the electric loaders are idle systematically and the rest are utilized with a shift coefficient close to a unit, is another example. The insufficient level of utilization of computer equipment in the national economy is largely due to the disproportion between the production of basic and auxiliary (peripheral) equipment, as well as software. These types of disproportions must be eliminated in the first place.

Structural disproportions are reflected in the utilization of equipment not only in terms of time, but also capacity, lifting power and size and other technical parameters. At the same time, in contrast to the time factor the underutilization of parameters is not reflected in accounting at all, although from the point of view of the effect on the capital-output ratio it hardly makes any difference whether a machine is idle for half the time, or whether twice as expensive a machine as needed for the performance of given operations is utilized.

The type-size structure of equipment manufactured for a number of sectors insufficiently meets the actual needs of production and the nature of the subject of labor and performed production operations. The elimination of this noncorrespondence requires a greater differentiation of the type sizes of machines and an increase in the proportion of machines of a large capacity or lifting power (for example, turbines, presses, locomotives, railroad cars and containers, dump trucks, tractors, bulldozers, crane trucks and so forth) and of machines of small sizes and capacities. It is necessary to develop new capacities not only for the production of big and heavy machines, but also small inexpensive metalcutting lathes, tractors of the orchard and garden type, motor vehicles of a low lifting power and so forth.

For the purpose of improving the structure of machinery and equipment, in our opinion, it is necessary, first, to transform this structure into a special object of planning, for this purpose including additional forms of tables determining the technologically conditioned proportions of various groups and type sizes of equipment, tools, accessories, spare parts and so forth in national economic plans of all levels. If there is a shortage of resources, changes in plans should be made so that rational proportions between combined types of equipment are not disrupted. Second, it is desirable in all sectors to expand investigations in the area of determination of the need, analysis of the sphere of rational application of machines and correspondence of their parameters to real operating conditions.

Third, it is advisable for machine building sectors together with the sectors that consume equipment to develop advanced sectorial machine systems, as well as such functional systems as transport lifting equipment, motors, instruments and so forth. Finally, fourth, it is necessary to plan the production of sets of equipment, not of individual machines.

Of special importance is the question of the efficiency of utilization of expensive highly productive, new equipment, especially of such automation equipment as equipment with digital program control, automatic lines and electronic computers. Forming in terms of quantity a small part of all the units of equipment of enterprises, the indicated equipment in its value often occupies a very significant proportion in the total volumes of capital investments and in the value of the active part of fixed productive capital. Meanwhile, the calculations of the efficiency of various trends in scientific and technical progress and various types of new equipment show that the most productive automation equipment usually is characterized by the longest periods of recovery of expenditures.

In 1977 the average period of recovery of expenditures on measures for new equipment, as a result of the savings from a reduction in production costs, in industry was 3.1 years, including measures for the introduction of advanced technology, 2.5 years, modernization of existing equipment, 2.7 years, mechanization, 3.7 years and introduction of computer equipment (including automated control systems), 5 years.

New automatic lines, as well as machine tools with digital program control, often have long periods of recovery. In order to demonstrate that their efficiency is within the standard, planning and design organizations often overstate in calculations the productivity of new models or especially select as a basis for comparison the least efficient of the replaced equipment.

Apparently, the reasons for the comparatively long recovery of the most modern automation equipment should be sought in the following directions. First, in the sphere of production of equipment sufficiently efficient methods and designs of automation equipment are not always chosen, sometimes more expensive equipment than necessary is developed and an unsubstantiated rise in the cost of equipment or its inferior manufacture is also tolerated. Second, in the sphere of application of automatic equipment often it is not taken into account that its efficiency can be ensured only with a higher loading than required for less expensive equipment.

In practice, significant gaps between the estimated and actual efficiency of new equipment are observed. They are mostly due to two reasons: Either the actual time of utilization of equipment is shorter than that accepted in the calculation, or in the sphere of application new equipment performs less complex and expensive operations than those envisaged in the calculations of efficiency.

When acquiring equipment, especially expensive, new machinery, an enterprise often does not take into account at what level and nature of loading and during what period it will be recovered. It is assumed that the efficiency of a machine is demonstrated by its planners and manufacturers. However, the latter always substantiate efficiency with regard to the optimum loading and to the sphere of optimal application of their design.

In our opinion, the interval values of the periods of recovery at various levels of utilization should be indicated without fail in the planned documents and technical certificates of expensive industrial equipment (automatic lines, equipment with digital program control and heavy and custom-made machines). At the same time, enterprise managers will know better the conditions under which the acquisition of such equipment is economically advisable and should be responsible for ensuring such conditions.

The pool of automatic lines, whose number in industry increased from 6,000 in 1965 to 20,600 in 1977, including in machine building and metalworking from 3,000 to 10,500, stands out in its scale and importance among various types of new equipment. On the basis of the average number of units of equipment in a line, 170,000 to 180,000 units of industrial equipment were built into 20,600 lines, including about one-half in machine building, where, according to our calculations, in 1977 the value of installed automatic lines comprised almost 10 percent of the total value of operating machinery and equipment. At one of the motor plants automatic lines comprise 2 percent of the total number of machine tools in physical units, but in terms of conventional units their proportion rises to 24 percent, that is, 12-times higher.[7]

The level of utilization of automatic lines is higher than the average in all equipment. For example, according to the data of a daily statistical survey of 18 May 1977, about 4,000 machining lines operated with a shift coefficient of 1.73, as compared to 1.42, for all metalcutting lathes in basic production. More than 600 automatic assembly lines had a shift coefficient of 1.59.

The proportion of totally nonoperating automatic machining lines comprised 8.4 percent and of assembly lines, 12.2 percent, as compared to 14 percent for all equipment. On the average, in 24 hours the utilized machining and assembly lines worked 12.2 and 11.1 hours respectively, as compared to 10.1 hours for the pool of metalworking equipment as a whole. The integral coefficient of extensive utilization of equipment[8] on 18 May 1977 was 0.457 for the entire pool of basic production, 0.716 for automatic machining lines and 0.625 for automatic assembly lines.

However, behind the comparatively high indicators of the level of utilization of automatic lines there is a sharp differentiation of this level and a great potential for improving the utilization of lines.

According to the data of the survey of fixed capital for the mechanization and automation of production conducted at industrial enterprises on 1 July 1977, of the total number of automatic lines included in a grouping according to the shift level, 16 percent worked up to 1 shift, 55 percent, from 1.1 to 2 shifts and 29 percent, more than 2 shifts. At the same time, 5.4 percent of the lines were utilized up to one-half of their productivity and 17.4 percent, from one-half to three-quarters and only 46.4 percent worked at the entire planned capacity or more.

Such are the statistical data. However, the actual level of utilization of the capabilities of automatic lines is much lower. First, the indicators of extensive utilization on the day of survey are higher than the average as a result of the preparatory measures especially taken at plants. Second, the rated productivity of automatic lines is lower than the technological (that is, technically possible) productivity and the planned productivity often is lower than the rated productivity. If the degree of utilization of lines were calculated with regard to the technological productivity, its level would have been much lower than according to the survey data.

One of the reasons for such a situation is the single-object (that is, in practice, nonreadjustable) nature of most lines,[9] insufficiently rational approach to the selection of objects of automation and machining techniques, design imperfections, low quality of manufacture and shortcomings in the organization of the mastering, servicing and repair of lines.

In our opinion, it is necessary to take special measures for the selection of the most efficient automation equipment, that is, to introduce an obligatory parallel development and competitive selection of automation plans (allocating additional funds for preplan research and planning); to include a special section--"need and level of utilization"--in the technical and economic substantiation of automation plans; to indicate in the technical and economic substantiation, as well as in technical documents for automation equipment and systems, the dependence of the basic indicators of their efficiency on the level of utilization; after the establishment of this dependence to demand from the customer confirmation of the availability of a load ensuring the efficiency of automation equipment; to intensify the role of manufacturers of automatic lines in their mastery, in the training of personnel for servicing them and in their repair and modernization; to increase the share of multiobject readjustable lines and to lower their cost by making them up from universal and standard machine tools.

In the wide set of problems of equipment utilization the importance of an efficient utilization of electronic computer equipment increases every year. From 1968 through 1978 the production of computer equipment increased more than 14-fold and during the indicated period its total value (in current prices) amounted to about 20 billion rubles. Taking into account that the standard service life of an electronic computer is 10 years, obviously, the

total value of the pool of computer equipment (with due regard for imported machines) is comparable with this amount. According to tentative estimates, this value is also fully comparable with the total value of the pool of metalcutting lathes in the national economy and, subsequently, will greatly surpass it.

Little attention is given to the utilization of electronic computers in the economic literature and there are no statistical publications on this problem. Problems relative to the rational shift level of various types of electronic computers, role of individual factors determining their loading and underutilization of the technical capabilities of electronic computers, especially the latest ones, capable of operating in a multiprogram mode have not been studied sufficiently.

An analysis of the utilization of electronic computers (not only in terms of time, but also in terms of the vast technical opportunities opened by their speed and "memory" for improving control) is of such great importance and has such significant differences from an analysis of the utilization of industrial equipment that it is necessary to organize a series of special investigations of this problem.

It is well known that the level of utilization of electronic computers in various organizations is highly different. For example, in the industrial enterprises of the Ukrainian SSR by the beginning of 1975 the average daily loading of electronic computers totaled 10.3 hours, whereas at other enterprises these machines were utilized about 15 hours in 24 hours and in some multimachine computer centers, even up to 22 hours.[10]

At present almost all ministries, departments and many organizations develop their own plans for automated control systems. This leads to a dissipation of forces and funds, insufficiently competent execution of work, slow introduction of problems solved by automated control systems and, in the final analysis, inefficient loading of the technical base of automated control systems. In practice, many automatic monitoring systems controlled by electronic computers, which formally are considered introduced and put into industrial operation, are idle.

Acquiring electronic computers, enterprises and organizations often are not prepared to utilize their capabilities. As a result, electronic computers are used for the simplest recording and accounting operations, that is, as "big adding machines," not as powerful control equipment.

The sectorial principle of distribution of electronic computers (instead of their concentration in computer centers for collective use), small number of serviced organizations (for example, in the Ukrainian SSR industry, on the average, there are about three outside organizations per computer center), insufficient reliability of electronic computers and provision with auxiliary and peripheral equipment, poor training of engineering and technical personnel for the utilization of electronic computers, often

even their lack of interest in the presentation of accurate production information and, finally, uneven distribution of electronic computers throughout the country's sectors and regions--all this lowers the level of utilization of electronic computer equipment both in terms of time and its computing capabilities.

A record of the level of intensive utilization of electronic computers determined both by the nature of solved problems and by the utilization of a multiprogram operating mode, as well as of other "capabilities" of modern electronic computers, is totally absent. Meanwhile, owing to the lag in the production of mini- and microcomputers, instead of them often it is necessary to use big computers designed for operation in a time sharing mode, capable of simultaneously solving complex problems for several subscribers. Furthermore, the insufficient development of communication and the shortage of peripheral equipment greatly limit the possibilities for the transfer and direct input into electronic computers of data from subscribers located far from the electronic computer center. As a result, modern big electronic computers of the YeS type operate primarily in a single-program mode and, at the same time, approximately one-third or one-fourth of their capabilities in terms of the volume of processed information are utilized, which is even not reflected in the record of their loading.

Not claiming an exhaustive characterization of measures necessary for improving the utilization of the pool of electronic computer equipment, we will enumerate a number of tasks in this area, which, as it seems to us, result from an analysis of the present state of this problem.

In the area of production of computer equipment: improvement in the structure of electronic computers; accelerated development of the production and a significant increase in the proportion of mini- and microcomputers; increase in the correspondence of the standardization and parameters of electronic computers to the nature of the tasks performed by them; increase in the output of peripheral equipment and software; increase in the reliability of electronic computers.

In the area of distribution and general organization of utilization: rise in the level of socialization of the pool of electronic computers by concentrating it primarily in large electronic computer centers; development of systems for the processing of data for collective use; connection of electronic computer centers among themselves and with communication channels serviced by subscribers; performance of all work on the development of automated control systems by specialized organizations.

In the area of planning, stimulation and recording of the utilization of electronic computers: changeover from the planning and recording of the loading of electronic computers according to time to planning and recording according to the volume of processed information and increase in the interest in the utilization of electronic computers in a multiprogram mode.

To develop measures for improving the utilization of electronic computers, it is necessary at least once in 2 years to conduct a detailed statistical study of the level of their utilization with a grouping of electronic computers according to types, classification, nature of solved problems, number of serviced subscribers and so forth.

The development of forms of collective utilization of machines and of flexible systems of their distribution and redistribution among consumers and the allocation of equipment for temporary use--all these measures should apply not only to electronic computers, but also to a number of other types of equipment.

Modern production often needs certain equipment occasionally or periodically. The need for equipment often changes in connection with a change in the list of products or the scale of their output. In such cases the development of various forms of joint use of equipment or its transfer for temporary use become the most efficient forms of organization of equipment utilization.

In broad terms it is a question of the further development of public motor transport and of the concentration of construction equipment in trusts and administrations of mechanization servicing many construction organizations. Mobile units for the repair of petroleum and gas wells and some other types of repair equipment are concentrated in a similar way in specialized organizations. The further specialization of repairs contributes to the same goal.

The allocation of instruments for temporary use is developing quite successfully, although for the time being on a limited scale, in Moscow and some other major scientific centers. In our opinion, it is advisable to establish in the Soyuzglavstankoinstrument system an office for the sale and leasing of used metalworking equipment. This will make it possible to increase the mobility of the machine tool pool, as a result of which the number of inoperative machines will be reduced and the mobility of production will be increased.

An extensive cooperation of machine building enterprises in filling orders for the machining of parts could be an important form of joint utilization of equipment. Sharp differences in the level of loading of various technological groups of equipment and the inevitably arising disproportions between the structure of the pool and the structure of the machine intensiveness of the production program serve as the basis for such cooperation.

In our opinion, it is advisable to place the indicated cooperation on a modern base, establishing automated systems for the control of the cooperation of enterprises for the utilization of equipment (ASUKIO) in large machine building centers.[11]

Record of the utilization of such types of equipment as metalworking, construction, computer and other equipment has significant shortcomings, which lower the reliability of the results of recording to such an extent that an embellished or completely wrong picture of the level of utilization is created in a number of cases. These shortcomings are connected mainly with the rare periodicity of recording and its random nature and with the same approach to an evaluation of the utilization of any unit of equipment, regardless of its novelty, significance in production and value. Surveys are mostly concerned with the level of extensive utilization (according to the time of operation) and do not determine the level of utilization of the capacity, productivity and basic technical parameters of equipment.

Thus, in machine building daily statistical surveys of the utilization of metalworking equipment are held once in 2 years. The date and procedure of survey are known in advance, which enables enterprises to take measures to raise the level of utilization of equipment on the day of survey.

The data on the utilization of construction equipment are also insufficiently accurate. They concern only basic construction machines, often are based on unchecked, estimated data and do not take into account intrashift idle time and the level of utilization of machines in terms of capacity or productivity. Such shortcomings are observed in the record of utilization of machines in light, food, woodworking and timber industries and other sectors.

Evidently, it is necessary to develop and implement in all sectors measures for improving the recording of the utilization of equipment so that it may give information of a twofold kind: current (on stoppages or availability at a given moment of unutilized machines), so that the production manager or controller may take the appropriate measures; analytical, so that long-term measures aimed at improving the extensive and intensive utilization of machines may be developed.

In order to obtain current information, it is necessary to equip machines (especially expensive ones) with electric counters and other instruments for recording their operation, to provide shops and enterprises with units of the UPI and Signal types and others, to utilize the method of controlling the ratio of electric power consumption in kWh to the power of electromotors and electric equipment in kWh and to more widely introduce methods of daily recording of the shift coefficient used at some machine building plants. To obtain analytical information, it is necessary to utilize periodical multiaspect daily surveys conducted both by the bodies of the Central Statistical Administration (for example, in machine building) and by the enterprises themselves. At the same time, it is necessary to record equipment not only in terms of quantity, but also value, in order to more accurately determine the place and share of unutilized equipment in the entire pool.

The most important problem--slowing down the growth and even relatively reducing the size of the equipment pool--cannot be solved without the establishment at enterprises of an incentive system that would interest workers in increasing the loading of equipment and in fulfilling the production program with a smaller volume of fixed capital. The decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving the Planning and Intensifying the Effect of the Economic Mechanism on an Increase in the Efficiency of Production and Quality of Work" envisages a number of measures aimed at improving the utilization of the production apparatus. Thus, for improvement in the planning of the loading of capacities of great importance will be the drawing up in 1979-1980 for each production association (enterprise) of a document containing data on the availability and utilization of production capacities, including on the shift coefficient. In our opinion, realization of this decision will require improvement in the methods of calculating production capacities, in particular a significant expansion of the range of equipment taken as the basis for such calculations. It will also be necessary to develop efficient methods of recording and to outline ways of eliminating the technological noncombination of equipment, which often (especially in discrete production sectors) sharply lowers the level of its utilization.

As economic levers and incentives for improving the utilization of fixed capital the decree envisages the possibility (with due regard for the characteristics of individual sectors) for the formation of a material incentive fund of enterprises for such indicators as an increase in the capital-output ratio and shift coefficient. When assignments for production and profit with a lower value of capital than envisaged in the plan are fulfilled, the savings on the capital use charge are left at the disposal of associations, enterprises and organizations.

On the basis of the presented instructions it is necessary, as it seems to us, to work out standard statutes on systems of incentives for enterprise workers for improvement in equipment utilization. Very successful experience in such incentives was accumulated at individual enterprises, in particular at the Sumy Machine Building Association imeni M. V. Frunze.

First, a regime shift coefficient of equipment operation is established (and taken into account daily) for all shops and sections.

Second, a standard production equipment capability is calculated for subdivisions.

Third, the scale of bonuses for engineering and technical personnel is built depending on the utilization of the standard production capability of subdivisions with due regard for the quality of output.

Without exaggeration it can be said that the application of such incentive systems to the entire industry would make it possible to conduct a policy of growth of production capacities under conditions of a reduced size of the pool, as a result of an increase in the productivity and improvement of the utilization of machines.

Thus, improvement in the structure of machinery and equipment is especially directed not only toward an increase in their productivity, but also toward a rise in the level of extensive and intensive loading. Special control over the distribution and utilization of expensive, highly productive, new equipment; use of modern means and methods of systematically recording an extensive and intensive utilization of equipment; development of forms of collective utilization of machines; introduction of a system of incentives for the utilization of the production capability of enterprises in terms of equipment--in our opinion, these are some problems whose solution (along with a general improvement in the organization of production and supply) is necessary for changing over from the tendency toward a decline to the stabilization and then growth of the capital-output ratio.

FOOTNOTES

1. The shift coefficient of equipment operation in machine building was lowered even more.

2. Metal consumption includes (according to estimates by A. M. Polyak) all types of cast and rolled metal products used in machine building.

3. Calculations of the index of the number of hours per loom ($J_ч$) were performed according to the data on the change in the indices of the volumes of fabric production ($J_т$), productivity of one loom ($J_п$) and number of looms ($J_с$) according to the following formula proposed by us:

$$J_ч = \frac{J_т}{J_п \quad J_с}$$

4. See: MEKHANIZATSIYA STROITEL'STVA, 1976, No 6, p 4.

5. See: MEKHANIZATSIYA STROITEL'STVA, 1978, No 2, p 2.

6. See: "Narodnoye Khozyaystvo SSSR v 1977" /USSR National Economy in 1977/, Moscow, Statistika, 1978, pp 147 and 153.

7. See: P. V. Tal'mina, "Finansovyye Problemy Povysheniya Effektivnosti Osnovnykh Fondov Predpriyatiya" /Financial Problems of Increase in the Efficiency of the Fixed Capital of an Enterprise/, Moscow, Finansy, 1978, p 76.

8. Calculated as the product of the coefficient of operating equipment (share in the total pool), of the shift coefficient (with regard to the two-shift time available) and of the coefficient of utilization of intrashift time.

9. In 1977 multiobject lines comprised only 38.6 percent of all the automatic lines in industry and 38.4 percent, in machine building.

10. See: M. A. Skoromnyuk, "Effektivnost' Organizatsionnykh Form Ispol'zovaniya EVM" /Efficiency of Organizational Forms of Utilization of Electronic Computers/, Moscow, Ekonomika, 1978, pp 34-36.

11. Automated systems for the control of the cooperation of enterprises for the utilization of equipment were discussed at greater length in our article in the journal VOPROSY EKONOMIKI, 1978, No 5.

11,439
CSO: 1820

NEW SYSTEM OF EVALUATION OF FIXED CAPITAL PROPOSED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 10, Oct 79 pp 118-119

/Article by Ye. Dyukova, Alma-Ata: "Evaluation of the Efficiency of Fixed Capital"/

/Text/ In the economic literature recently the efficiency of fixed capital has been examined from the point of view of two independent problems, that is, the efficiency of fixed capital and the efficiency of its utilization. At the same time, the problem of reproduction and improvement of means of labor is meant by efficiency of fixed capital.[1]

Noting that fixed capital becomes the determining factor in economic growth and in the increase in production efficiency, T. A. Ashimbayev considers it "advisable to differentiate the efficiency of capital from the efficiency of its utilization. The former reflects the combined results of the process of reproduction and improvement of fixed capital and increase in the capital-labor ratio and the efficiency of utilization of capital shows its return in the form of mass of use values."[2]

The indicated concepts must be differentiated without fail, because the efficiency of reproduction and improvement of fixed capital and its utilization have a different content and carry different functional loads. The result of reproduction and improvement of fixed capital is the development of labor saving, new equipment. In the process of utilization its potential becomes the actual saving of live labor.

---

1. See: V. A. Vorotilov and Yu. K. Gaydayenko, "Effektivnost' Osnovnykh Fondov i Metody Yeye Ekono[illegible]roy Otsenki" /Efficiency of Fixed Capital and Methods of Its Econo[illegible]ation/, Leningrad, Lenizdat, 1975, p 7.

2. T. A. Ashimbayev, "Effekti[illegible]st' Promyshlennogo Proizvodstva" /Efficiency of Industrial Production/, Alma-Ata, Nauka, 1976, p 273.

In our opinion, we should not limit ourselves to the division of the concepts "efficiency of fixed capital" and "efficiency of its utilization." The independence of the concepts mentioned is not manifested in their separation. It is rightful not so much to speak of the need to combine the efficiency of reproduction of fixed capital with the efficiency of its utilization as to raise the question of their unity.

Fixed capital represents embodied, materialized capital investments. The quality of planned studies, reproduction and technological structure of capital investments, reduction in the cost and shortening of the periods of capital construction and prompt and overall commissioning of fixed capital ensure the efficiency of the latter. The processes of increase in the efficiency of capital investments and fixed capital are closely interconnected. For example, the efficiency of new productive capital is determined by the selection of the best variant of capital investments. Therefore, it is rightful to consider the efficiency of capital investments one of the factors in the efficiency of fixed capital, that is, the latter concept is more overall and broader than the former.

In our opinion, the efficiency of fixed capital should represent the unity of the efficiency of three components, that is, capital investments, reproduction of fixed capital and its utilization. At the same time, the term "efficiency of fixed capital" remains, but a broader and deeper content, that is, interconnection of all the components--planning and utilization of capital investments and reproduction, renovation and efficient utilization of fixed capital--is put into it.

The unity of the concepts of efficiency of capital investments, reproduction of fixed capital and its utilization within the framework of efficiency of fixed capital ensues from its role, content, purpose and performed functions. For example, the investment process (capital investments), renovation and qualitative improvement of fixed capital and dynamics of prices of equipment and output of capital construction characterize the reproduction process as a whole. This makes it possible to conclude that the efficiency of capital investments and the efficiency of reproduction of fixed capital are interconnected. The same physical-material structure of expenditures, as well as the creation of the potential economic effect (capacity of new means of labor to save labor), is common for them.

The latter can be transformed into an actual effect only as a result of the operation of new means of labor. The greater the amount of fixed capital among that created that participates directly in the production process and the better it is utilized in terms of time and capacity, the more the actual economic effect differs from the potential effect. Therefore, in our opinion, the positions of some economists, who identify the efficiency of reproduction and efficiency of utilization of fixed capital, are wrong. In this case it is necessary to raise the question of the unity of the interconnected concepts, not of their identity.

Having determined the essence of the efficiency of fixed capital, it should be given a quantitative evaluation by means of economic indicators. Since the efficiency of fixed capital pertains to complex economic processes and is a manysided problem including several aspects of efficiency of means of labor, it is natural that its quantitative evaluation can be expressed by their combination, not by one indicator. Every indicator should characterize a certain aspect of the problem of efficiency of fixed capital.

The system of indicators presented in the table is developed as applied to the production association and enterprise, which have available all the information necessary for calculations--data of statistical, bookkeeping and current reporting. This system, not claiming to fully cover various indicators, permeates all the aspects of the reproduction process.

Depending on the scale, goals and depth of the conducted analysis it is possible to use part of the system for an economic substantiation of the increase in the efficiency of fixed capital. The use of such a system of mutually supplementing indicators will make it possible to draw the correct conclusions on the level and dynamics of efficiency of fixed capital.

Subsystem of Efficiency of Fixed Capital	Group of Indicators	Individual Indicators
Efficiency of capital investments	General characterization of capital investments	Reproduction and technological structure of capital investments Dynamics: of capital investments (rates of growth) of commissioning of fixed capital of incomplete construction
	Efficiency of capital investments	Ratio of increase in net output (profit) to capital investments that brought about this increase Specific capital investments: per unit of commissioned production capacity (key types of products) per ruble of increase in gross (commodity) output Period of recovery of capital investments
Efficiency of reproduction of fixed capital	General characterization of fixed capital	Dynamics of fixed capital (rates of growth) Technological structure of fixed capital by elements
	Movement of fixed capital	Coefficient: of renovation of fixed capital of withdrawal of fixed capital of increase in fixed capital
	State of fixed capital	Coefficient: of fitness of wear Age structure of fixed capital
	Capital saturation (technical level) of production	Capital-labor ratio Machine-worker ratio (technical equipment) of labor Power-worker ratio
	Improvement of fixed capital	Coefficient: of increase in unit capacity (productivity) and in the service life of equipment

		of reduction in the cost of a unit of capacity of equipment
	Efficiency of reproduction of fixed capital	Capital-output ratio Output-capital ratio General profitability
Efficiency of utilization of fixed capital	Utilization of equipment	Coefficient: of extensive load (calendar, regime and planned time available and shift system) of intensive load of integral load of the utilization of the pool of equipment (installed and operating)
	Utilization of production capacity	Coefficient of utilization of production capacity
	Utilization of production area	Coefficient of utilization of production area
	Efficiency of utilization of fixed capital	Capital-output ratio Output-capital ratio General profitability

11,439
CSO: 1820

KAZAKH GOSPLAN DEPUTY CHAIRMAN DISCUSSES NEW ECONOMIC STRATEGY

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 10, Oct 79 pp 16-22

[Article by Zh. Abutalitov, Deputy Chairman of Gosplan of the Kazakh SSR: "A New Stage in the Party's Economic Strategy"]

[Text] In connection with the publication of the decree of the CC CPSU and USSR Council of Ministers "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Improving the Quality of Work" the editors of this periodical have been receiving letters from readers with the request that we comment on individual points of the document and explain what kinds of changes will be brought into the party's economic strategy by the realization of the complex of measures mapped out by the decree.

We have asked the Deputy Chairman of Gosplan of the Kazakh SSR Zharysbek Abutalipovich Abutalipov to reply to these letters.

The new decisions of the CC CPSU and USSR Council of Ministers preserve the continuity of the basic principles and propositions of the economic policy of the CPSU which were put into practice after the October (1964) Plenum of the CC CPSU and provide for a further development of them and for the accomplishment of a system of measures to further improve planning and the entire managerial mechanism and to bring them into correspondence with the new possibilities and requirements of the current stage of the development of the economy.

The basic content of the decisions which have been adopted consist in the following.

It is planned to have a further improvement of planning by means of the development of systems of long-term, five-year and annual plans and a strengthening of the role of long-term planning in the development of the economy and thereby ensure the continuity of the action of plans

and the creation of conditions for rhythmic work by collectives: overall programs for scientific and technological progress for a period of twenty years (by five-year periods) and the basic directions of economic and social developments for ten years (by five-year periods) will be worked out. Every five years they will be refined and worked out for the following five-year period. And they are already being used as a basis for working out state plans for economic and social development for five years (with a distribution of assignments by years) which are supposed to be made up and presented for approval no later than five months before the beginning of the following five-year plan.

The lack of continuity between individual years of the five-year plan with regard to the action of plans and economic activity is eliminated on the basis of the distribution of the assignments of the five-year plan by years.

A permanent procedure has been established for developing national economic, branch, and territorial plans which provides for a further strengthening of the centralized planning principle in the development of the economy along with an expansion of the initiative of enterprise and association collectives in making up intense plans and taking fuller account of intra-enterprise reserves, which should help to strengthen both principles of democratic centralism in management.

A mechanism is being created for turning the five-year plans (with the distribution of assignments by years) into the chief form of economic planning and of the organization of the economic activities of enterprises and ministries; the work done on it in its depth and indicators is approaching the planning of the drafts of annual plans. Within the five-year plan for every year balances of material and labor resources and production capacities, a financial balance, and a population monetary income and expenditure balance are worked out; material and financial reserves are provided for in accordance with established norms for the needs of production, capital construction, and scientific research work, and in necessary cases reserves of production capacities are also provided for; as a rule stable wholesale prices and fees are maintained during the course of the five-year plan. For the first time the evaluation of the fulfillment of the five-year plan is being performed in a running total from the beginning of the five-year plan (and not as a total of annual plans).

In the annual plan the assignments are concretized and in necessary cases the indicators which have been approved in the five-year plan for the corresponding year are refined.

In the system of approved indicators of the plans it is planned to make wide use of normed net output (the newly created product in a given

planning period which characterizes the contribution of each collective to the growth of national income) instead of commodity (gross) output which will be determined in estimates; the role of physical indicators is increasing (output for export and commodities for children are distinguished, equipment is planned in a wide products list, and the role of highest category output becomes more important); ceilings on the number of workers and employees and assignments to reduce the use of manual labor are established; and the importance of the indicator of output deliveries to consumers with regard to which the total amount of sold output will be determined is increased. In order to make an economical use of raw materials, materials, and fuel and energy instead of profits, it is planned to approve an output cost reduction indicator in the plans of individual ministries. This should also be helped by the development and approval of economically substantiated circulating capital norms for enterprises. In order to develop the managerial initiative and independence of ministries as large production management complexes the number of indicators approved for them in the annual plans is substantially reduced.

In order to strengthen the social thrust of the plans it is planned to work out summary sections within them for the entire complex of measures in the field of social development (an improvement of working conditions, an improvement of skills and occupational expertise, of the general educational level and cultural and everyday conditions of life, of medical services, and others). Measures to increase the role of Soviets of Peoples' Deputies in the development of social development plans are invisaged.

Measures to improve the balance of the plans have been planned.

Operating production and new construction are regarded as a single whole -- in the drafts of the five-year plans capital investments for the development of the branches of material production are provided for a planned increase in the amount of output and services. For this reason and toward this end the draft plans contain balances and calculations of the use of existing production capacities, fixed capital, and also summary plans for the reconstruction and reequipping of enterprises, including on the basis of the production development fund, with calculations of the need for the capital investments and equipment which are necessary to carry out the planned measures which have to be provided for in the plans in the first place.

It has been established that resources for the construction of new and expansion of operating enterprises are allocated if the economy's need for a given type of output can not be supplied by operating enterprises through their reconstruction and reequipping.

In order to coordinate production and capital construction plans with material and technical resources the procedure for developing material balances and output distribution plans in the long-term five-year and annual plans is defined; the responsibility of Gosplan USSR, Gossnab USSR, and branch ministries for the balanced nature of plans for given types of output is established; and Gosplan USSR and Gossnab USSR are made responsible for providing concrete measures in the plans for overcoming "bottlenecks" and strains which arise in supplying the need for individual types of output.

It is established that the responsibility for satisfying the economy's needs for output of a necessary assortment and quality belongs to the ministry which is the head one in producing the given output.

The coordination of production plans for a full-scale products list and output assortment and also of delivery schedules has to be performed by supplyer enterprises and production associations and consumer enterprises jointly with the main administrations for sales and supply; measures have been planned to increase the role of Gossnab USSR and its agencies in determining and studying the economy's needs for concrete types of output and in supplying the branches with material and technical resources.

The role of head industrial ministries and trade ministries has to be increased in studying demand, in production, and in supplying the population with consumer goods. Towards this end, it is planned to develop a system of firm stores, to improve the work of wholesale markets, and to improve contract relations between trade organizations and industrial associations.

The role of the economic contract is increased. It is planned to complete during the Tenth Five-Year Plan the shift of all production associations (enterprises) to direct long-term economic relations involving the conclusion of contracts for five years.

In order to provide the economy with labor power punctually and fully it is planned to work out labor resources balances for the USSR and union republics within the basic development directions for ten years and the five-year and annual plans. Ministries, departments, and labor agencies have been charged with systematically developing and carrying out measures for the efficient use of existing cadres and with developing plans for supplying their subordinate enterprises with labor power.

The establishment in the plans of a ceiling on the number of workers and employees and of an assignment to reduce the use of manual labor will be an important measure. Increased balance in the economy will

be promoted by the introduction of planning on all levels of management of the development of five-year financial plans with their distribution by years. In making up the five-year plans summary calculations of the income and expenditures of the state budget, and also calculations of long-term and short-term credit for the five-year period will be considered for the first time.

A number of measures are planned to ensure the development of intense plans: It is being made a practice to give ministries, departments, and enterprises control figures for the five-year plan (including economic norms); the composition of the annual plan begins from below -- from enterprises and organizations; and the role of counterplans in fulfilling the assignments of the five-year plan becomes more important (now they are mandatorily coordinated with material and technical resources, and after this they are included in the annual plan and acquire the force of law).

It is established that the plans of production associations (enterprises) have to be worked out in accordance with their certificates and the employment of progressive technical and economic norms on the use of production capacities and resources; stable norms for the five-year period (with a differentiation by years) of profit allotments which are left at the disposal of enterprises, wage expenditure norms, and norms for the formation of the material incentives funds are defined, which should impel collectives to take high production (construction) indicators.

In order to stimulate the adoption of intense plans it is permitted at the same time to define the maximum amounts of annual bonuses for executive workers in relation to the intensity of plans.

In order to efficiently combine branch and territorial planning, USSR ministries and departments have been charged with improving the development of the drafts of development plans for branches in a territorial breakdown and of ensuring their joint examination with the councils of ministers of the union republics, and of working out with the participation of the councils of ministers of the union republics and of approving in coordination with Gosplan USSR schemes for the development and siting of industrial branches (with consideration given to the conclusions of oblasts when these schemes are worked out). They have also been charged with informing the councils of ministers of the union republics of the control figures and basic indicators of the drafts and approved plans for the enterprises and organizations of union subordination located on the territory of a given republic.

The councils of ministers of the union republics develop and present to Gosplan USSR and the USSR ministries and departments proposals on the drafts and plans of enterprises of union subordination, having in mind the overall economic and social development of a republic. The basic indicators of plans of enterprises of union subordination located on the territory of a given republic are included in the economic development plan of that republic. The councils of ministers of the union republics and oblispolkoms have also been given the responsibility of making up and approving summary plans for the production of local construction materials and consumer goods and plans for municipal housing and cultural and domestic construction, and also control over the fulfillment of these plans. In addition, it is stipulated that when the indicators for enterprises of union subordination are included in the summary plans the point of departure should be the planning assignments approved for them of the USSR ministries and departments.

A procedure is being introduced whereby in order to coordinate the capital construction plans with the capacities of construction organizations and with labor resources the councils of ministers of the union republics work out and present to Gosplan USSR and to the appropriate USSR ministries plans for contracting work being carried out by the union-republic ministries of these republics. Gosplan USSR has been charged with examining at the same time the draft plans presented by the USSR ministries and by the councils of ministers of the union republics. For the first time it has been charged with making up territorial balances of the production and distribution of the most important types of output in accordance with which schedules of optimal freight flows for the mass types of freight are to be determined, which will promote a further improvement of the siting of the productive forces and a rationalization of the work of all types of transportation.

The councils of ministers of the union republics and the oblispolkoms work out long-term and annual balances of labor resources for the republics and oblasts. It has been ordered that there be an increase in the role of local labor agencies in supplying enterprises and organizations with labor power and in finding jobs for released workers. At the same time, a decision has been made by the USSR Council of Ministers by which the individual questions of economic construction are turned over for the examination of the union republics.

The planning and stimulation of scientific and technological progress. It is planned to turn the plan for the development of science and technology into an organic component part of the state plan -- to take fuller account of the effect of introducing new equipment on the indicators of the plan.

It is planned to develop an overall program for scientific and technological progress for twenty years and to expand the use of the special-purpose program method in planning science and technology.

Within the five-year plans it is planned to develop scientific and technical, economic, and social programs which represent a directive and addressed document coordinated by resources, executors, and performance schedules and full complex of socio-economic, production, scientific research, and managerial organizational measures aimed at the resolution of a national economic problem whose solution requires the participation of many branches and economic agencies. The list of these programs is defined and approved by Gosplan USSR with the participation of USSR ministries and departments and the councils of ministers of the union republics for a year and a half before the beginning of the five-year plan and is worked out together with the drafts of the five-year plan. Five top-priority programs have been defined: the economizing of fuel and metal, the economic development of the BAM zones, a decrease in the use of manual labor, and an increase in the production of new consumer goods.

The previously developed special programs were isolated ones; they were frequently developed outside of the framework of the process of composing the economic plans. Now the program method is becoming a permanent planning instrument.

Taking the long-term plans and overall programs into account, ministries and departments will develop five-year and annual plans for raising the technical level of the branches.

It has been established that the planning and construction of new and expansion and reconstruction of operating enterprises has to ensure the production of output which corresponds to or surpasses the best domestic and foreign models. It is planned to perform interdepartmental expert appraisals for the technical and economic indicators of individual especially important types of output and technological processes, and an evaluation of the technical level of the machinery, equipment, and other equipment being produced has to periodically be carried out; the role of standards is increasing and the order has been given to review and develop a program of work to standardize output, including in it the most important types of consumer goods. In order to better support the planned measures for scientific and technological progress a single scientific and technical development fund is created in the ministry; scientific research, planning, and other organizations are transferred to a cost accounting system of organizing work on the basis of schedule orders (contracts), with it in mind that in a subsequent time they will be transferred to a system of settlements for

fully completed and client-accepted work instead of stage-by-stage payment. Economic stimulation funds will be created in these organizations.

In the field of capital construction. The task of reducing in the next few years the amount of incompleted construction in the economy as a whole to normed amounts is being set as a top priority one. At the same time, beginning with the 11th Five-Year Plan it is planned to carry out a system of measures to improve the managerial mechanism in construction which fundamentally changes the procedure for planning capital investments in evaluating the work of construction organizations.

It is planned toshift to approving for USSR ministries and departments and for the councils of ministers of the union republics stable five-year capital construction plans (with a distribution of assignments by years) which are balanced against resources of materials, technological and energy equipment, labor and financial resources, and also the capacities of construction and installation organizations. At the same time, it is permitted in giving planning assignments for the five-year period to subordinate enterprises and organizations to set aside a reserve of capital investments and construction and installation and contracting work in the amount of 5 percent of their total ceiling, providing them with the appropriate material and financial resources.

It is planned to establish assignments for the commissioning of capacities and objects, for commodity construction output (the value of the construction and installation work on enterprises delivered to a client, stages, start-up complexes, objects, and output which is prepared for production or the performance of services), and a rise in labor productivity and profits in the plans of construction ministries, associations, and organizations as the basic indicators by which the evaluation of their work and economic stimulation should be performed.

Instead of total capital investments in construction and installation work, a ceiling is approved -- the maximum amount of expenditures for the planned commissioning of finished enterprises and objects and for the creation of normed stocks.

The capital investments and construction and installation work (which have to become as a rule, stable) and the title lists of construction projects for the entire period of construction (with the establishment of assignments by years) which are developed on the basis of the ceilings have to be unchanged party documents which are mandatory for clients, contractors, planning, financial, and banking agencies, and supply organizations. The procedure for approving title lists and lists in relation to the estimated cost to the construction project is defined in the decision.

It is planned to perform settlements between clients and contractors for fully completed enterprises, objects, and start-up complexes, and not for individual stages of work, as is now done. With the shift to the new procedure the issuance by clients of advances to contracting organizations for expenditures connected with the incompleted performance of construction and installation work is halted, and these expenditures, right up to the delivery of the objects, will be covered by bank credit. In the event that the planned periods for the use of a loan are exceeded the collection of increased interest is provided for.

It is planned to gradually shift in individual branches to the construction of enterprises (installations) on the basis of credit extended to the contractor in the amount of the full cost of the construction of an enterprise as defined by an estimate accepted by the general contractor, with finished enterprises (installations) delivered "key ready."

In order to ensure the continuity of the action of plans for construction projects it is planned to approve the list of the most important and of other newly begun construction projects and enterprises under expansion and to issue orders for the production of the basic production equipment for the entire construction period without halting the effect of the orders with the onset of the calendar year: to finance construction within the limits of the estimated cost, regardless of the distribution of appropriations by years and quarters. The lagging in the fulfillment of the capital works plan which took place last year has to be made up for next year.

As has already been noted, it is planned that capital investments for new construction and for the expansion of operating enterprises will be allocated if the draft plans of ministries have provided for the full use of capacities at operating enterprises.

Additional benefits and incentives are established for construction workers for increasing the amount of work they perform in the reequipping and reconstruction of enterprises.

The decree also embraces a number of other important issues in the planning and organization of construction: a further improvement of the structure of capital investments, the implementation of a single technical policy in construction (the drafts have to be grounded on a modern technical basis, the efficient use of labor and material resources is provided for), and an improvement of the procedure and the approval of drafts and estimates; five-year plans are being worked out for planning

and research work, and the documentation for the forthcoming year has to be preapred by 1 July of the preceding year; an improvement of the procedure for working out and examining plans for contracting work, an improvement of providing construction projects with overall equipment supplies, of financing for construction organizations, and of the wages and bonuses of construction workers (it is planned to increase the amount of bonuses for commissioning projects and to introduce bonuses for their ahead of schedule commissioning); the shifting of construction projects to overall materials supplies through orders in accordance with approved documentation; an improvement of the management of capital construction; the shifting in 1979-1980 of construction and installation associations to a two- and three-echelon system of management; and in certain cases trusts will become the basic cost accounting element in construction.

In the field of cost accounting and economic levers and stimuli. The following measures to strengthen economic methods of management and to eliminate shortcomings in their practical application are planned:

to strengthen cost accounting in production associations (enterprises) and construction and installation organizations on the basis of its close coordination with the assignments of the five-year plan and the use of long-term stable economic norms. Cost accounting methods are receiving a wide application in all-union (republic) associations and in industrial and construction ministries. In our republic this procedure has been introduced in the Ministry of Motor Vehicle Transport, Ministry of Nonferrous Metallurgy, the Main Administration for Gas, and the Ministry of Timber Industry Kazakh SSR. Toward this end it is planned to complete in two to three years the formation of production associations as the basic cost accounting element of industry; to increase the interest and responsibility of production associations (enterprises) for the fulfillment of the production plan and of output deliveries in keeping with economic contracts.

The evaluation of the results of the work of production complexes and also economic stimulation for them will be performed on the basis above all of their fulfillment of the deliveries planned (by products list and schedule), a rise in labor productivity, an improvement in the quality of output, and an increase in profits (in individual branches -- a decrease in costs). When a ministry or industrial or production association fails to fulfill the annual profits plan that part of it which is left at the disposal of the collectives is decreased, but payments to the budget cannot be reduced.

In order to expand the initiative of labor collectives and the rights and independence of enterprise executives in using the resources left at

their disposal it is planned: to shift during the 11th Five-Year Plan to the formation of economic stimulation funds on the basis of stable norms approved by the years of the five-year plan for each enterprise and ministry (they are now individual for each year of the five-year plan and for enterprises and ministries); to establish these norms above all for the qualitative indicators of an enterprise's work. To define the absolute amounts of the economic stimulation funds for ministries and enterprises in the five-year plan as an estimate to ensure the strict use for their purpose of these funds, and to expand the rights of enterprises in their expenditure (to independently determine the direction and use of the funds).

The planned amounts of work and the resources necessary for realizing them on the basis of monies from the production development fund are provided for in the state economic and social development plans. On the basis of the five-year assignments a stable norm is established for profit allotments which are put at their disposal (this procedure now is in operation in the Ministry of Motor Vehicle Transportation of the Kazakh SSR); at the same time their commitment to the state budget is guaranteed; 50 percent of above-planned profits are left at the disposal of the ministry (association, enterprise). In the event that the profits plan is overfulfilled by more than 3 percent, 25 percent of this excess is left at its disposal; an incentive markup is established for new high quality output 70 percent of which will be assigned to the economic incentives funds while the remainder is put in equal parts in the single scientific and technical development fund and the state budget. In addition, it has been stipulated: with the production of second category products or of products which have not been certified within the established schedule -- discounts amounting to 50 percent of the profits realized from the sale of this output will be made from the wholesale price. If products of obsolete models are not removed from production in time, an enterprise is totally deprived of the profits from their production.

A dependency is being established between the total wages of workers' collectives and of each worker upon improving labor productivity and final work results for which purpose the right is granted to pay workers additions to their wages and salaries on the basis of an economy of the wage fund: for occupational doubling up and the performance of work with a smaller number of workers -- 50 percent of the wage rate, for high qualifications in engineering and technical workers and employees -- 30 percent, and for production engineers and designers -- 50 percent of their salaries; to pay workers lump-sum incentives for reviewing output norms on the basis of the economy received as a result of the review of these norms; it is planned to widely introduce the team form of organizing and stimulating labor,

keeping it in mind that during the 11th Five-Year Plan this form is supposed to become the basic one. In the decree team leaders are given the right to define within the norms and resources which have been established for them the amounts of bonuses and of earnings with regard to the real contribution of each member of a team to the overall work results, and they are given the right to present workers for pay additions.

In order to increase the interest of production associations (enterprises) in a better use of productive capital and in economizing material resources it is planned to workout economically substantiated circulating capital norms; the fee for above-norm remainders of physical assets and uninstalled equipment is payed on the basis of the profits which are left at the disposal of an enterprise; the list of productive capital for which today large fee benefits are provided is curtailed. An increase is being made in the social insurance allotment rates which will provide a more correct idea of the actual expenditures for the reproduction of labor resources and will correctly define the economic effect from the introduction of new equipment and from strengthening stimuli for an efficient use of labor power. A new payment to the budget is being introduced -- a fee for water -- which will stimulate a better use of water resources; an economic evaluation of the lands allocated for the construction of enterprises will be made.

In January 1982 it is planned to introduce new wholesale prices for industrial output and new rates for electric and fuel energy which are supposed to promote the stimulation of scientific and technological progress and the strictest economizing of fuel and energy resources, ferrous and nonferrous metals, and raw materials and materials, and an improvement of the quality of output.

In the development of the new wholesale prices the net output norm is given especial emphasis in them.

It is planned to increase the responsibility of Gosplan USSR and of the ministries and departments for a strict compliance with planning discipline, for ensuring the punctual development of plans, and for their absolute fulfillment for all approved indicators.

The demands upon the quality of the plans being worked out are increasing. Drafts which do not meet the new demands are sent back for additional work by Gosplan USSR. The ministries and departments have to give the enterprises plans for all indicators (including material and technical resources) no later than a month and a half before the beginning of the planning year and to ensure the stability of the plans which have been approved for enterprises, not permitting their correction or their being tailored to the actual level of fulfillment. When such

instances are permitted the heads of ministries, departments, and other managerial agencies with whose permission a reduction of planning assignments occur are called to accountability, and the executive workers of enterprises are deprived of their bonuses.

In connection with the new procedure in planning, it is planned to make changes in the statistical and bookkeeping reporting. A further curtailment and simplification of the accounting and reporting of enterprises, associations, ministries and departments is planned.

In order to realize the decisions which have been made it will be necessary to work out a number of normative documents: a regulation on the certificate of a production association; on overall deliveries of technological equipment, lines, and units; on bonuses for workers for commissioning capacities and objects; on the procedure for distributing profits and for settlements with the state budget; on the formation and expenditure of the economic stimulation fund; methodological instructions on the procedure for working out and employing the net output indicator; on the development and refinement of an overall program for scientific and technological progress; on defining the intensity of plans; on the formation and use of the single scientific and technical funds; on determining the long-term wage norms per ruble of output; on planning and taking account of an increase in the production of highest quality category output; a system of technical and economic norms and normatives in construction; the drafts of the decisions of the USSR Council of Ministers on norms for material reserves; on interest rates for the use of bank credit; branch corrective coefficients on reconstruction and reequipment work for the estimate norms in construction and the overhead expenditure norms; and instructions on transferring branch scientific research, planning and designing, production, and research organizations to payment for completed and accepted work.

2959
CSO: 1820

SIBERIAN ROLE IN USSR ECONOMIC DEVELOPMENT

Moscow OBSHCHESTVENNYYE NAUKI in Russian No 6, Nov-Dec 79 pp 52-67

[Article by Doctor of Economic Sciences and Professor Aleksandr G. Granberg, Deputy Director of the Institute of the Economics and Organization of Industrial Production (IEiOPP) of the Siberian Division of the USSR Academy of Sciences. Granberg is a specialist in the field of economic-mathematical modeling and optimum territorial-production planning: "Siberia in the USSR National Economy"]

[Text] Siberia has been transformed in recent decades into one of the largest economically developed regions of the USSR. Its pronounced specialization in the unionwide territorial division of labor and the ever-growing impact of Siberia on the development of the entire national economy demand a review of this region's socioeconomic problems in the unionwide economic system.

Siberia (the West-Siberian and East-Siberian economic regions) currently produces 2.5-fold more gross social product and national income than Kazakhstan, two-fold more than all the Central Asian republics, and more than the Baltic republics, the Transcaucasus and Moldavia put together. Over all the recent five-year plans, the rates of development of the Siberian economy have consistently exceeded the union average, resulting in a steady rise in Siberia's proportion of the country's economic potential.

A most important factor in the economic development of Siberia is the availability of very rich natural resources in this region -- minerals, water, timber and soil. These resources are capable of meeting the domestic and a significant portion of the export needs of the country long into the future. However, the present level of economic development of Siberia in no way corresponds to its natural opportunities. Development of the region is being retarded by a shortage of labor resources (eight percent of the country's population) and accumulated fixed assets. Nonetheless, the economic potential of Siberia is already quite substantial.

Industrial production plays a leading role in the economy of Siberia. It provides upwards of 70 percent of the region's gross product and was 8.9

percent of all USSR industrial production in 1975. The gross industrial output per capita here is 12 percent higher than on average for the USSR. In the 1960's and 1970's, the region's industrial production was developed faster than USSR industry as a whole. Production in all branches of heavy industry (except for machine building, chemical industry and building materials industry) and light industry increased more than on average for the USSR. A most important result of the industrial development of Siberia has been the creation of a very large fuel and power base in Western Siberia and union centers for the production of nonferrous metals, lumber and wood-processing output, and energy-intensive chemical products.

Siberia is steadily increasing its proportion of the unionwide production of electric power and the output of nonferrous metallurgy, fuel, timber and other branches of industry. By the end of the Ninth Five-Year Plan (1971-1975), Siberia was already producing more than 20 percent of all the output of extractive industry in the USSR, one quarter of all the fuel and energy resources (including 30 percent of the coal and petroleum), one quarter of the commercial wood and lumber, about 10 percent of the ferrous metals, and a considerable proportion of many chemical products. Siberia exceeds not only the unionwide indicators, but also corresponding indicators for the overwhelming majority of the developed capitalist countries in terms of per capita production of petroleum, coal, commercial wood and a number of other products.

The growing role of Siberia is reflected even more graphically in indicators of output increment. Thus, in the Ninth Five-Year Plan, Siberia provided 9.6 percent of the increment in all industrial output, 38.4 percent of the increment in fuel industry output (including 83.2 percent of the increment in petroleum extracted and 32.9 percent of the increment in coal), 17.9 percent of the increment in timber industry output (including 83.2 percent of the increment in commercial wood shipped), 16.5 percent of the increment in electric power generated, 19.9 percent of the increment in rolled metal production, and so on.

The branch structure of the region's industry reflects its role in the unionwide territorial division of labor as the largest producer and supplier of fuel, mineral raw material, nonferrous metals, timber and wood-processing output, and a number of energy-intensive chemical products. The proportion of extractive industry in Siberia is 2.3-fold higher than on average for the USSR. But branches of industry producing the bulk of the end product (machine building, light and food industry) and relatively labor-intensive have a substantially lower proportion than on average for the USSR.

The branch structure which has evolved at this particular stage basically corresponds to economic expediency from unionwide positions (taking into account the insufficiency of available labor resources and capital investment to complete the "upper" stories of the production complex). But the economic advantages of developing a number of production facilities in Siberia are still far from being fully actualized. This applies first of all

to the comprehensive use of natural raw material (petroleum, gas, nonferrous metal ores, wood, and so on) and the production of energy-intensive output.

Analysis also shows that the machine-building enterprises available in Siberia are inadequately oriented towards meeting the requirements of the basic branches of the Siberian economy and that a considerable portion of the machine-building output being produced is being shipped out to the European regions of the country. It has been estimated that upwards of 40 percent of the region's gross machine-building output (excluding metalworking and repairs) is accounted for by subbranches which could more expediently be located outside the region.

In spite of natural and climatic conditions which make intensive agricultural activity difficult in a considerable portion of the region, Siberia provides eight percent of the USSR gross agricultural output, which corresponds to its proportion of the population. However, the production levels achieved are still inadequate to satisfy efficient foodstuffs consumption norms (with the exception of grain products and potatoes).

Siberia is among the regions with accelerated economic mastering of new territories. As a consequence of this, the proportion of capital construction in the gross social product here is nearly 1.5-fold higher than on average for the USSR. The trend towards a gradual increase in that portion of the capital investments being directed to meet Siberia's needs has been evident since at least the early 1960's. Nonetheless, construction has not yet been able to fully meet the region's needs. This has its greatest effect on the development of the production and social infrastructure. Lag in the area of transport, engineering equipment, housing construction and other elements of the infrastructure has retarded economic development of the region and has substantially reduced the rates and effectiveness of the economic utilization of new territories.

Transport plays an exceptionally important role in the enormous expanses of Siberia, both in the economic utilization and support of normal production and consumption within the region and in ensuring regular economic ties with other regions of the country. Siberia accounts for approximately 17 percent of the unionwide freight turnover and 12 percent of the unionwide shipments. But the level of transport branch development is far from adequate: the transport network is several-fold less well developed here than the unionwide level.

The influence of the Siberian economy on development of the national economy is determined foremost by the fact that Siberia is meeting an ever-growing proportion of the unionwide need for fuel, nonferrous metals, timber products and chemicals. Deliveries of output from Siberia to regions of the European portion of the USSR and the Urals, which are experiencing a deficit of energy resources and which no longer possess adequate reserves of many types of mineral raw material, are of particular importance.

A considerable amount of machine-building, light, food and other output, as well as agricultural produce (and first of all vegetables and fruit) is brought in to Siberia. The shipment structure which has developed in this regard is basically efficient (given consolidated review), inasmuch as it frees us of the necessity of organizing our own production of many types of output which can be produced more efficiently in other regions, and it enables us to concentrate material, labor and financial resources on developing branches of unionwide specialization.

The intensiveness of interregional exchange (both import and export) in Siberia is on the whole outstripping production growth. This testifies to the intensification of specialization of the Siberian economic complex within the system of unionwide territorial division of labor.

The presence in Siberia of very rich natural resources permits the extraction and processing of diverse raw material on a broad scale and the creation of energy-intensive and water-intensive production which substantially exceeds analogous production in the European portion of the USSR in terms of its technical and economic indicators. The high concentration and combination of reserves of diverse natural raw materials which are inherent to the region facilitate the creation of especially large production facilities within the framework of the most efficient forms of territorial organization of the economy (territorial-production complexes and industrial centers). This provides an opportunity for obtaining an additional impact through production agglomeration.

However, there are also a number of negative factors which make economic development of Siberia difficult and which reduce the potential effectiveness of that development. Such factors include, first of all: the shortage of labor resources, increased cost of reproducing manpower and difficult living conditions in a number of regions, the necessity of large capital investments in the initial mastering of a territory (rayon-wide production and social infrastructure), higher cost of production due to difficult natural and climatic conditions on a considerable portion of the territory (especially in construction and agriculture), and remoteness from the most developed economic and cultural centers of the country.

The indicated positive and negative factors influence the economic effectiveness of developing different branches and production facilities dissimilarly. Thus, the extraction of petroleum, natural gas, coal and nonferrous metal ores and production of a number of energy-intensive ferrous and nonferrous metallurgy products, chemicals, commercial wood, lumber and so on, in Siberia currently does not, as a rule, have competitors in other regions of the USSR, not just in terms of direct production expenditures, but also due to the impossibility of organizing corresponding production on the necessary scale anywhere else but in Siberia. But the relative effectiveness of developing production in Siberia decreases as one moves away from the primary branches (extraction of natural raw materials) into branches producing transportable output for final consumption and requiring large expenditures of live labor.

The creation of an effective production complex in Siberia assumes: development of natural resources extraction and transport to levels necessary to meet the requirements of the country and the foreign market; development of unionwide-specialization production to process natural raw materials -- electric power engineering, metallurgy, chemical, wood-processing, pulp and paper industry and others; development of complex-forming production which will meet the requirements of unionwide-specialization branches and the population of the region (machine building, construction and construction industry, transport, the foodstuffs complex, production of certain types of consumer goods, and the services sphere). In solving the problem of what regional production is effective, reliance must not be placed solely on economic indicators used in branch calculations (prime cost, calculated expenditures, and so forth, in current prices). The effectiveness of a regional complex must be viewed from the position of the country's entire national economy.

Judging by synthetic economic indicators, the effectiveness of the production complex of Siberia as a whole is currently no lower than the average union level, and the effectiveness of live labor use is substantially higher. According to calculations by the IEiOPP of the USSR Academy of Sciences' Siberian Division, labor productivity (in terms of national income produced) was nearly 1.2-fold higher here in 1975 than the union average. For Siberia as a whole, the return on fixed production capital is lower than the union average, but this is to be explained to a significant extent by the fact that especially capital-intensive branches (extractive industry, electric power engineering, transport) occupy a relatively high proportion of the branch structure of the Siberian production complex and also (in part) by the higher cost valuation of capital and the necessity of a greater availability of capital in order to economize on manpower in short supply.

On the whole, the outstripping rates of growth in the Siberian economy over the past 10-15 years have been ensured with a more efficient use of resources than in the USSR on average. A number of qualitative characteristics have improved appreciably here. Whereas per capital national income (net product) production was approximately 10 percent below the union average in 1965 in Siberia, it exceeded the average for the USSR by 16 percent in 1975.

A comparison between unionwide gross product dynamics indicators and the national income produced in Siberia permits the conclusion that the overall materials-intensiveness in this region has decreased somewhat over the past 10 years, that is, it has changed in a direction counter to the pattern for the union. This is associated first of all with the rapid development of less materials-intensive branches.

The Siberian economy has comparatively poorer indicators in terms of use of fixed production assets. Over the past 15 years, the capital intensiveness of Siberian industry has grown nearly one-third (the USSR average -- 24 percent). This is to be explained in part by the accelerated growth of the most capital-intensive branches.

Outwardly, intensification of the labor factor in Siberia corresponds roughly to the average union level. In the Ninth Five-Year Plan, the industrial output increment obtained through labor productivity growth was 90 percent in Western Siberia, 86 percent in Eastern Siberia and 84 percent for the USSR as a whole. The national income increment obtained through labor productivity growth in the "Siberia and the Far East" zone was 73-75 percent, and for the USSR as a whole -- 80 percent. But in analyzing these indicators, consideration must be given to the fact that the manpower shortage seriously retards the rates of economic development in Siberia and for that reason the optimum proportion of growth obtained through an increase in the number of people employed must obviously be higher here than for the USSR on average.

For Siberia, extensive investment trends are characteristic to a greater degree than for other territories of the country. This is to be explained first by the fact that, given the higher rates of growth in capital investments and fixed assets here, relatively more fixed assets and capital investments are expended per unit of gross product. Only by thorough analysis will we be able to reveal, on the one hand, the extent to which the higher capital-intensiveness of production in the region is a consequence of the higher cost valuation of fixed assets and the expediency of creating more capital-intensive but labor-saving technologies and, on the other, the extent to which this fact is to be explained by the insufficiently effective use of fixed assets, that is, by causes which are organizational and economic in nature. Second, the proportion of capital investments directed into the renovation, retooling and expansion of existing enterprises in Siberia, although gradually growing, remains substantially smaller than on average for the USSR. Third, the proportion of unfinished construction is significantly higher. The higher proportion of unfinished construction is to be explained in part by the composition of the projects being built, a large percentage being enterprises with long construction cycles (hydroelectric power engineering, coal, metallurgical and chemical industry).

In analyzing indicators of the comparative effectiveness of production in Siberia, it must be borne in mind that calculations made on the basis of current prices do not always provide a sufficiently objective picture. The main advantages of developing many types of Siberian production associated with the use of natural resources are not reflected in calculated expenditures and wholesale prices, which do not include rent valuations for natural resources in short supply. Analysis of the current wholesale price system by economic-mathematical models and comparison of domestic prices with world market prices permit the conclusion that the prices set in the USSR for the output of extractive branches of industry and agriculture are substantially understated, and that, on the other hand, they are relatively inflated for the output of a number of branches of processing industry. As a result, Siberia's proportion of the country's national income and gross social product is artificially understated in the indicators, and the synthetic indicators of the effectiveness of the regional complex are worse.

At present, there is a substantial gap between world and domestic prices for petroleum, natural gas and many products of oil refining, petrochemistry, nonferrous metallurgy, timber and wood-processing industry. If the amounts of basic types of output of Siberia and the USSR (including those for which domestic prices are relatively higher than world prices) were translated into world prices, the indicator of the region's proportion of the USSR gross product and national income would be increased by a minimum of 2-3 percentage points; correspondingly, indicators of labor productivity and return on capital, as well as the growth rates of social product, national income and finished manufactured output of Siberia would increase by at least one quarter. Recalculating production volume, labor productivity and return on capital in optimum valuations as calculated using an optimized interbranch, interrayon model yields approximately the same results.

Evaluating the effectiveness of production in Siberia on the basis of a comparison of production expenditures (with modifications in methods of measuring them) is not the only possibility. The region's contribution to the resolution of national economic tasks must also be evaluated on the basis of the results of the interregional exchange of diverse resources.

By our estimates, the total importation of output into Siberia in 1975 exceeded the total exports by approximately three billion rubles (calculating on the basis of domestic prices for final consumption). In this connection, the question might arise of whether the negative export-import balance testifies to the fact that Siberia plays a passive role in the unionwide territorial division of labor, that the USSR national economy contributes more to the Siberian economy than it receives and as a result (at least at the present stage) worsens the opportunities for its own development.[1] This question should be answered, in our opinion, from two positions.

First, it must be stressed that the balance of exchange does not directly describe the influence of the economy of an individual region on development of the national economy as a whole. We must research more thoroughly the mechanism whereby the region's economy operates (interacts) as part of the national economic complex. To this end, the IEiOPP of the USSR Academy of Sciences' Siberian Division has made special calculations using an optimized interbranch, interrayon model (OMMM) and a "West-East" model for different variants of ties between Siberia and the remainder of the country.

---

1. In the Soviet economic literature, the negative balance of exchange for Siberia and the Far East is explained by the fact that these regions are only beginning to be developed and require a large amount of resources with a considerable delay in return in the form of output increment, so the country must keep subsidizing these regions. This explanation, in our view, weakens the overall scientific argument in favor of the urgent economic necessity and significant national economic effectiveness of accelerated development of the productive forces of Siberia and the Far East, even in terms of the immediate future.

It was demonstrated that, thanks to the inclusion of Siberia in the unionwide division of labor, the ultimate effectiveness of the national economy (expressed in the size of the consumption and nonproduction accumulation fund) has increased by a minimum of 25-30 percent.

Second, we must be critical of the results of calculations of the interrayon exchange balance of Siberia on the basis of current prices. It was noted above that current prices artifically understate the actual contribution of Siberia to the unionwide economy. According to data from R. Shniper, recalculating Siberian imports and exports to world market prices would lead to a positive balance of 8-9 billion rubles. The value of the interrayon exchange balance of Siberia changes in the same direction when the optimum output valuations obtained from the OPPM are used.[1] Thus, with improvement in the methods of value measurement, the import-export exchange of Siberia also testifies to the active role this region plays in developing the USSR economy.

The national-economic approach to determining prospects for the socioeconomic develop of an individual region signifies that the planned rates and proportions of the region's development must be coordinated within the framework of an effective unionwide territorial division of labor and must facilitate the maximum possible growth in meeting the needs of the entire society.

The primary features of the up-coming stage of USSR national economic development are, first, increasing attention to resolving a whole series of socioeconomic tasks which directly influence an increase in the well-being of the people and, second, a transition to the predominant use of extensive sources of economic growth. In this regard, several features of future USSR development will have a decisive influence on the selection of economic development strategy for the Siberian region. These include, in our view: an anticipated reduction in the rate of population and labor resources growth; the indicated trend towards a reduction in the rate of capital investment growth; depletion of mineral deposits in the European portion of the country; the rapid development of foreign economic ties.

The problems of providing the Siberian economy with labor resources will be exacerbated in the near term not only in connection with a sharp reduction in natural population increment among those of working age, but also due to a greater danger of an outflux of population to those regions of the country moving into the group of regions with labor shortages. It should be taken into account that over the past three five-year plans (1961-1975), when the availability of labor resources in European regions of the USSR

---

1. OPPM forecast calculations for the period up to 1975 which were made in 1967-1970 yielded the following results: the 1975 balance in Siberia in current prices was expected to be -3.6 billion rubles and in optimum valuations it was to be +2.[illegible] billion rubles (See: A. G. Granberg, "Optimizatsiya territorial'nykh proportsiy narodnogo khozyaystva" [Optimum Territorial Proportions of the National Economy], Moscow, 1973, p 177).

was more favorable, Siberia lost upwards of one million persons as a result of migration.

The primary direction in which the problem of labor availability in Siberia is being solved is unquestionably the accelerated (as compared with other regions) growth in labor productivity and implementation of a consistent labor-conservation policy in all branches of the economy. In order to secure local personnel and attract additional labor resources to Siberia, it is at the very minimum necessary to create for the population of Siberia a substantial priority in raising the standard of living and to conduct a policy of using labor resources more economically in the western and southern regions of the USSR. These socioeconomic policy directions are statewide in character and do not reduce to the problems being solved within Siberia.

Beginning late in the Ninth Five-Year Plan, the USSR economy exhibited a tendency towards reducing the rate of growth in capital investment. The average annual rate of capital investment growth in the 1966-1975 period, 7.3 percent, has decreased to 4.4 percent in the 10th Five-Year Plan. If this process continues, the task of accelerated development of Siberian productive forces will be seriously complicated. The requirements of the Siberian economy for capital investments are objectively growing. This is associated with the necessity of rapidly developing capital-intensive union-specialization branches (fuel, metallurgical, chemical, timber) and overcoming the lag in the production, social and personal-services infrastructure. But with a reduction in the growth rate (much less in absolute amounts) of capital investment for the country as a whole, a significant increase in the proportion of capital investments directed into Siberia might lead to an absolute reduction in investment in other regions, and first of all in the European zone of the country. This in turn would create a real counter-trend to the accelerated growth of productive forces in the eastern regions of the country. Under these conditions, is it permissible to begin reducing Siberia's proportion of unionwide capital investments? National economic calculations must demonstrate that it is.

It is forecast that in a number of USSR regions and especially in the European zone, opportunities for providing industry with fuel, energy and raw material from local resources will decrease. Expenditures on extracting a majority of the mineral resources will increase in connection with the transition to poorer deposits and mining conditions, as a rule. In this situation, the economic role of Siberia will increase, both in connection with its advantages in terms of technical-economic indicators and, in many instances, due to the absence of other alternatives in the national economy.

In the long term, the rates of USSR foreign trade turnover will obviously outstrip the rates of production growth. The Soviet Union will engage increasingly actively in the international division of labor system, foremost in the course of socialist economic integration. Here, the role of Siberia will not be restricted to growth in export deliveries of such types of raw material as petroleum and petroleum products, gas, coal, nonferrous metals, and so forth, which are needed by CEMA countries. A qualitatively new

phase of cooperation began with the transition to the joint construction by CEMA countries of enterprises such as the Ust'-Ilimskiy Pulp and Paper Combine, for example, to process local raw material.

A majority of the Siberian resources are in practically unlimited demand on world commodity markets. Therefore, when making decisions concerning prospects for developing the Siberian economy, consideration must be given to the changes being forecast in foreign trade.

We did research based on the OMMM on possible variants of the rates and proportions of development of the Siberian economy (in aggregate indicators). This model enables us to calculate and compare against one another balanced variants of national economic development in a territorial cross-section over a long period. The plan resolution variants are chosen on the basis of national economic optimality criteria, that is, maximizing the level of satisfaction of society's needs (in particular, the union nonproduction consumption and nonproduction accumulation fund in the prescribed structure) or minimizing expenditures of national economic resources to achieve a prescribed level of satisfaction of society's needs. In this regard, the demand that regional standards of living be drawn closer to one another must be taken into account.

In the optimization calculations for 1976-1990, the USSR was divided up into 11 economic zones (six zones in the European portion of the USSR and Urals, and also Kazakhstan, Central Asia, Western Siberia, Eastern Siberia and the Far East).

According to OMMM logic, when the rates and proportions of development of the Siberian region are determined, we require that they be balanced (coordinated) with the demand for developing other regions and branches of production and with the general (interregional) conditions of national economic development, and also that they correspond to the maximum possible level of attainment of national economic goals.

Preliminarily, variants of national economic development in which certain trends of the past are continued were calculated and analyzed. The question was posed as follows: To what consequences for the economy of Siberia and the country as a whole would extrapolation of the rates and proportions which have evolved to the future lead?

Obviously, not all the proportions of the past can be transferred to the future. For example, it is completely unrealistic to examine variants in which Siberia's proportion of the union extraction of fuel will not increase. Under conditions when opportunities for increasing fuel extraction in other regions of the country have basically been exhausted, stabilization of this proportion would signify the almost complete cessation of growth in fuel extraction for the USSR as a whole. The situation is largely analogous with regard to the siting of lumbering operations, the production of a number of nonferrous metals, and so forth. It makes sense to examine only situations which could realistically be expected to arise in the future if

past trends continue. Primary attention has been focused on variants with the following starting hypotheses: retention of the trend towards a lower rate of capital investment while continuing the increase in the capital-intensiveness of production; retention of the labor productivity growth rate existing in the Ninth Five-Year Plan (for the USSR on average); retention of previous population migration trends.

It turns out that the calculated variants have a number of common features. In all variants, the Siberian economy develops faster than the USSR as a whole. As before, Siberia emerges as the largest supplier of fuel, nonferrous metals and timber output. Siberia's proportion of capital investments increases by up to 14-15 percent (even in the variant with decreasing rates of capital investment growth). A common negative feature of the variants examined is a reduction in the rates of growth of the USSR economy (especially for the first two variants). Therefore, in the next stage it was necessary to study the variants which anticipate a weakening of negative tendencies of socioeconomic development. The new series of variants also used a number of Siberian economic-complex development hypotheses which were reflected in the model's input: labor productivity growth rates exceed the union average; specific capital investments per unit of output increment are above the union average (except for extractive branches); a higher proportion of electric power-intensive processes is anticipated in metallurgical and chemical industry; the level of per-capita nonproduction consumption and nonproduction accumulation is above the union average; a positive population migration balance is anticipated, and so on.

Let us note several results of the "central" variant typical from the viewpoint of the ratios of rates and proportions of development of the Siberian economy and that of the USSR as a whole.

In the future, unionwide specialization of the Siberian region must be intensified. Metallurgy, electric power engineering, fuel, chemical and timber industry, building materials industry and construction, will be developed at rates exceeding the union average. In this regard, the rates of growth will be strongly differentiated in the branches: given the more even growth in a majority of branches, it would be impossible to develop union-specialization branches on the necessary scale, due primarily to the deficit in labor resources.

It is inexpedient to develop a number of branches in Siberia at high rates. These include machine building as a whole, light and food industry. However, individual subbranches of machine building, light and food industry oriented foremost towards meeting local needs and regulating the employment structure in certain regions have conditions favorable to development.

Siberia's proportion of unionwide production (in terms of gross social product, national income and gross industrial output) will be increased by approximately two percentage points. This share will increase especially appreciably in such branches as nonferrous metallurgy, fuel industry, electric power engineering, chemical and light industry. Siberia's share of unionwide capital investments will be increased by up to 15-16 percent.

The interaction between the productive forces of Siberia and those of other regions of the USSR during the course of economic development will be continuously intensified, which will be manifested in rapid growth in interregional exchange. In this regard, growth in exports of output out of the region will outstrip growth in imports.

The system of optimum valuations of the output of branches, labor resources and capital investments which compare the different types of expenditures and output being produced from the position of national-economic effectiveness corresponds to the optimum variant of territorial proportions of development of the USSR national economy.

One feature of evaluations of Siberian labor resources is that they are substantially higher than corresponding evaluations for European regions of the USSR and Central Asia. This confirms the contention that it is economically effective to redistribute the country's labor resources in favor of the eastern regions of the RSFSR.

Comparisons of regional evaluations of labor resources and capital investments show that the norm of expedient replacement of labor expenditures with additional capital investments in Siberia is 25 percent higher than the union average. This indicates that in Siberia it is comparatively more advantageous to use the more capital-intensive, labor-saving technologies.

Calculations of a number of OPGM variants with changing conditions reveal the following dynamic pattern: the average annual rate of increment in national income production in Siberia must be 1.2- to 1.4-fold higher than the union average (the ratio of gross product growth rates must be approximately the same). The indicated difference is optimum, that is, it corresponds to the maximum attainable level of satisfaction of unionwide needs. In this regard, one additional circumstance is explained: a deviation from the optimum growth rate value for the Siberian economy (to either side) leads to dissimilar consequences. If it is raised above the optimum, the value of the unionwide rate decreases insignificantly, but if the growth rate of the Siberian economy decreases below the optimum, the curve of the unionwide rate drops more steeply.

This response by the unionwide economy to a change in the rate of development in Siberia is characteristic of the interregional economic interaction mechanism in the USSR. On the strength of the features of its branch structure, a reduction in the rates of increment in gross product or national income production of the region is almost immediately reflected on the scope of development of union-specialization branches. But, inasmuch as a reduction in the production level of these branches in Siberia cannot be fully compensated for by an increase in production outside Siberia, it will in the end lead to a substantial reduction in the growth rates of the union economy.

In researching prospects for the development of Siberia, we must not limit ourselves to calculating just one optimum variant. The region's economy is

very elastic with regard to the factors and conditions of development of the union economy. In the future, this feature will intensify as a consequence of two causes: first, Siberia will account for nearly all the increment in the production of fuel, many nonferrous metals, energy-intensive chemical products, timber output, and for that reason it must compensate nearly completely for fluctuations in the union requirements for these types of output; second, due to the deficit in labor resources, fluctuations in the levels of development of specialization branches must lead to sharp changes in the levels of development of compensating and supplementing productions (such as machine building, light industry and, in part, food industry).

We need to develop possible development scenarios for the Siberian economy which correspond to the basic situations which might arise in the future but whose feasibility cannot be foreseen unambiguously. Obviously, the primary thing in working out a long-term territorial economic policy must be not a striving to unambiguously forecast the future values of indicators of the region's development, but a knowledge of the mechanism of territorial interactions in the process of optimizing the country's economy.

We examined five basic scenarios of Siberian development in the national economic complex, scenarios which are oriented towards studying a definite problem and which were shaped by generalizing variant calculations which anticipated these changes: in the efficiency with which fuel, raw and other materials are used; in the rates of labor productivity growth and in the number of labor resources through the attraction of additional manpower to Siberia; in unionwide capital investment resources; in Siberia's share of the unionwide nonproduction consumption and nonproduction accumulation fund; in the availability of transport to the economic ties of the country's eastern and western regions.

Let us turn our attention to several results concerning the consequences of change in the effectiveness of production factors.

Higher labor productivity naturally leads to growth in national income and the country's consumption fund. Inasmuch as Siberia is the region with the greatest labor deficit (challenged in this regard only by the Far East), increasing labor productivity (average increase for all regions) here yields a large economic impact. This is expressed in the fact that the gap in growth rates of national income produced between Siberia and the USSR as a whole is increasing somewhat in favor of Siberia.

Increasing the effectiveness with which material resources are used (reducing expenditure coefficients for fuel, raw and other materials for the national economy as a whole) will not lead to a weakening of Siberia's positions in the union economy. This process might reduce somewhat the expedient rates of development of raw material branches in Siberia (in view of the growth in export requirements, this reduction could not be significant), but at the same time it will facilitate the development in this region of production facilities for the thorough processing of natural fuel and raw

materials (by freeing labor resources in the extractive branches for other work). It is obviously most urgent now that there be a relative reduction in the demand for Siberian fuel in view of the growing difficulties in transferring it to the western regions of the country and in view of the effectiveness of creating energy-intensive production in Siberia.

The Siberian economy will react to an increase in capital investment effectiveness by accelerating the rates of its own development (especially of national income; gross product will increase insignificantly). In this regard, there will be a substantial restructuring of the branch structure, which is to be explained basically by the following reasons. First, the reduction in specific capital expenditures reduces the demand for construction and for means of production used to provide for the investment process (building materials industry, metallurgy, electric power engineering). Second, as a result of the reduction in these requirements and in the levels of production of corresponding branches in Siberia, labor resources are freed for other work and sent to lagging branches of the regional complex -- ferrous metallurgy, machine building and others. Calculations for variants with varying amounts of capital investment confirm the economic expediency of outstripping growth in capital investment in the Siberian economy and the high effectiveness of measures to lower capital expenditures. It should also be noted that the national economic impact of the capital investments being allocated will increase greatly given the simultaneous implementation of a labor-conservation policy (including by increasing the availability of capital to labor) and measures to save material resources.

The calculations made permit the conclusion that preferential development of the Siberian economy is the natural pattern of optimum development of the USSR national economy, that it is stable with regard to possible changes in conditions of development of the union economy. This conclusion is substantiated from the viewpoint of the criteria of economic expediency and factors yielding to economic changes within a 15-year period. Systematic recording of the social, political and other factors dictating the necessity of creating a powerful economic potential in the East must obviously provide new arguments confirming the correctness of the conclusions of a quantitative economic analysis.

11052
CSO: 1820

WHOLESALE PRICE MARKUP REGULATIONS FOR INDUSTRIAL PRODUCTS PUBLISHED

Moscow EKONOMICHESKAYA GAZETA in Russian No 51, Dec 79 p 6

[Article: "Incentive Markups to Wholesale Prices: Instructions on the Procedure for Establishing Incentive Markups to Wholesale Prices for New Highly Effective Technical Production Output and Discounts From Wholesale Prices for Second Quality Category Output, and also for Output Which has not been Certified on Schedule: Approved by the USSR State Committee for Prices 27 Nov 1979"]

[Text] The present instructions were worked out in accordance with the 12 July 1979 Decree No. 695 of the CC CPSU and USSR Council of Ministers "On Improving Planning and Strengthening the Influence of the Managerial Mechanism on Increasing Production Efficiency and Improving the Quality of Work" in order to ensure methodological and organizational unity in the establishment of incentive markups to wholesale prices for new highly effective technical production output and in the use of discounts from wholesale prices for second quality category output, and also for output which has not been certified on schedule.

I. On the Procedure for Establishing Incentive Markups to Wholesale Prices for New Highly Effective Technical Production Output.

In accordance with the 12 July 1979 Decree No. 695 of the CC CPSU and USSR Council of Ministers, an incentive markup to a wholesale price for new highly effective technical production output which corresponds in its parameters to the best domestic and foreign models is determined in relation to the annual economic effect from the production and use of this output in the amount of from .5 to 1.25 of the profitability norm which has been adopted for determining the prices for the given or an analogous group of products, but no more than 70 percent of the amount of this effect. A wholesale price markup for effectiveness and quality is set for a period of one year, and for output of especial complexity -- for two years. When a product is awarded the State Token of Quality during the course of this period the effect of the markup is

prolonged without changing its amount. The total effective period of a markup is established at four years, and for output of especial complexity -- for five years. When the production of this output is based on development work which has been recognized in the established procedure as a discovery or invention, the amount of the wholesale price markup for new highly effective output and for output which has been awarded the State Token of Quality is increased by 1.5 times.

When there is a second certification of output and it is awarded the State Token of Quality for the second time the incentive markup and the allotments to the economic stimulation funds are retained in the same amount on condition that the technical and economic parameters of the output have been improved. If the technical and economic parameters of the output are not improved, the amount of the markup and its effective period are cut in half.

In connection with this, the following procedure is established for approving incentive markups to wholesale prices for new highly effective technical production output:

1. Incentive markups to wholesale prices for new highly effective output are approved by the agencies which have been given the right to approve wholesale prices for the corresponding output.

For a products list whose wholesale prices are approved by USSR ministries and departments the incentive markups are set only with the agreement of the basic consumer of this output.

2. The incentive markups to wholesale prices for new highly effective technical production output which corresponds in its parameters to the best domestic and foreign models are approved at the same time as the wholesale prices when there is an approved chart of the technical level and quality of the output in which the correspondence of the product's parameters to the best domestic and foreign models is reflected, and also in which the planned schedule of the certification of the output for the State Token of Quality is specified.

Markups to wholesale prices for effectiveness and quality are established for a period of one year, and for output of especial complexity -- for two years. When products are awarded the State Token of Quality during the course of this period the effect of the above-markups is prolonged without changing their amount. The total effective period of markups is established at four years, and for output of especial complexity -- five years.

3. Incentive markups to wholesale prices for new highly effective technical production output are determined in relation to the annual economic effect from the production and use of this output in the amount of from .5 to 1.25 of the profitability norm which was adopted in setting the prices for the given or an analogous group of products, but not more than 70 percent of the amount of the effect.

The incentive markups are differentiated in relation to the relationship to the economic effect (E) and wholesale price (Tsop) of the new output in accordance with the following model scale:

1. Relationship between economic effect and wholesale price in percentages (E: Tsop x 100)	2. Amount of incentive markup in percentage of normed profits	
	3. For the attainment of a minimum interval border	4. For every unit within the interval
15-35	50	0.20
35-55	54	0.25
55-75	59	0.35
75-95	65	0.35
95-115	72	0.45
115-135	81	0.60
135-155	93	0.75
155-175	108	0.85
175 and higher	125	--

When the production of this output is based on development work which has been recognized in the established procedure as a discovery or invention, the amount of the markups to the wholesale prices for new highly effective output and for output which has been awarded the State Token of Quality is increased by 1.5 times.

The USSR State Committee for Prices may make changes in the above-model scale for individual groups of output on the basis of the specific nature of branches.

The amount of the annual economic effect from the production and use of technical production output and the amount of the incentive markup to the wholesale price must be cited in the information chart of the

calculation of the economic effectiveness and of the prices for the new output.

Economic effect is calculated in keeping with the "Methodology for Determining Economic Effectiveness from the Use in the Economy of New Equipment, Inventions, and Rationalizers' Proposals" which was approved on 14 February 1977 (No. 48/16/13/3) by the USSR State Committee for Science and Technology, Gosplan USSR, the USSR Academy of Sciences, and the USSR State Committee for Inventions and Discoveries in accordance with the branch methodologies.

When the amount of wholesale price markups is established before 1 January 1982 the profitability norms which were adopted in determining prices for the corresponding output are used, and beginning 1 January 1982 the new profitability norms which will be adopted from a review of wholesale prices and rates in industry will be used.

4. When associations or enterprises are deprived the right to use the State Badge of Quality the action of the wholesale price incentive markups is automatically halted and the allotments to the economic stimulation funds which are assigned to the funds from the beginning of the year in which the violations were discovered are reduced by the amount of the price markups for the given output.

5. When there is a second certification of output and when it is awarded the State Badge of Quality for the second time the wholesale price incentive markups are reapproved in the same amount on condition that there is an improvement of the technical and economic parameters of this output. An improvement of technical and economic parameters is reflected in the technical norm documents. If the technical and economic parameters of output are not improved, the amount of the markups and the period of their effectiveness are cut in half.

II. On the Procedure for Using Wholesale Price Discounts for Second Category Output, and also for Output which has not been Certified on Schedul

The 12 July 1979 Decree No. 695 of the CC CPSU and USSR Council of Ministers stipulates that for output of second quality category, and also for output which has not been certified on schedule discounts from wholesale prices are employed in the amount of 50 percent of the profits obtained from the sale of this output. Upon the expiration of the production removal period of second quality category output the wholesale price discounts are established in the amount of the total profits. The output is sold at undiscounted prices, and the amount of these discounts is deposited in the state budget. Wholesale price discounts

are not employed for spare parts and components which are produced for output which has been removed from production.

In this connection, the following procedure is defined for employing wholesale price discounts for second quality category output, and also for output which has not been certified on schedule:

1. The basis for the use of wholesale price discounts is a decision of the State Certification Commission classifying output in the second quality category or the expiration of the planned certification period of output.

2. The calculation of the amount of the wholesale price discounts and their deposit in the budget is performed by associations and enterprises. The amounts of the wholesale price discounts are deposited by associations and enterprises into the appropriate budget in relation to the subordination of the associations and enterprises without additional instructions from the agency which has approved the price.

3. The association or enterprise leader issues a special order which names the output of second quality category and output which has not been certified on schedule, and also the amount of the discounts (50 or 100 percent of profits) and the officials responsible for depositing the discount amounts into the budget in the procedure and at times determined by the USSR Ministry of Finance.

The directors of associations and enterprises, the deputy directors for economic matters (chief economists), the chiefs of the planning subdivisions of associations and enterprises and also the head bookkeepers are responsible for the correctness of the calculation of the amounts of the wholesale price discounts and also for their punctual deposit in the budget.

4. The amounts of the wholesale price discounts for second quality category output or output which has not been certified on schedule are determined on the basis of the established amounts of discounts and of the profits received from the sale of the output. When it is impossible to determine the actual amount of profits as a result of the absence of a report calculation, the amount of profits is calculated as the difference between the wholesale price and the planned cost of a product. In this case the order for the association or enterprise specifies the concrete amounts of the discount which are subject to deposit into the budget.

These discount amounts are reflected in settlements with the budget and are not included in the amount of profits and output sales.

The reflection of the discounts in accounting is performed in the procedure established by the USSR Ministry of Finance.

III. On the Procedure for Distributing and Reflecting the Wholesale Price Incentive Markups and Discounts in the Plan and in the Report on Total Sold Output and Profits.

In accordance with the 12 July 1979 Decree No. 695 of the CC CPSU and USSR Council of Ministers, the amounts of the wholesale price markups and discounts are not considered in the plan, but the evaluation of plann fulfillment is performed taking them into account.

The additional profits (the amount of the wholesale price markups) which are obtained by a production association (enterprise) from the sale of new highly effective output and of output with the State Token of Quality are distributed in the following manner:

70 percent is assigned to the economic stimulation funds of production associations (enterprises) and planning and designing, scientific research, and technological organizations while the remainder is distributed equally between the scientific and technical development fund and the state budget.

IV. On Sanctions for Violations of the Procedure for Establishing and Using Incentive Markups and Discounts.

A violation by ministries, departments, and associations and enterprises of the procedure for establishing wholesale price incentive markups for new highly effective production and technical output and of the use of wholesale price discounts for second quality category output and also for output which has not been certified on schedule is regarded as a violation of price discipline.

The removal into the income of the budget of the amount of additional profits which have been obtained from the incorrect use of incentive markups and discounts is performed in accordance with the 15 January 1974 letter No. 10-86/103/6 of the USSR State Committee for Prices and the USSR Ministry of Finance "On the Procedure for Calculating and Removing to the Income of the Budget Amounts of Additional Receipts which have been Obtained as a Result of the Violation of the Procedure for Approving or Employing Prices and Rates."

With the institution of the present instructions paragraphs 2 and 3 of Point 2 of "Instruction on the Procedure for Establishing Prices for Certified Output" which was approved on 8 October 1969 by the State Committee for Prices at Gosplan USSR (No. 10-15/1850) lose their effect,

as do Points 2.16 and 2.17 and Section 5 "The Determination of Wholesale Price Discounts for Previously Mastered Obsolete Output Which has been Designated for Replacement" and "The Methodology for Determining Wholesale Prices for New Technical Production Output" which were approved on 26 April 1974 by the USSR State Committee for Prices.

2959
CSO: 1820

KRASNOYARSK PLANNING, MANAGEMENT CONFERENCE DESCRIBED

Moscow EKONOMICHESKAYA GAZETA in Russian No 52, Dec 79 p 7

[Article by Yu. Makarov and N. Nikiforov: "A Modern Level of Management for Production"]

[Text] The ways to improve the planning and management of production in the industry of the kray have been discussed at a practical scientific conference which took place in Krasnoyarsk. Organized by the kray committee of the CPSU, the editors of EKONOMICHESKAYA GAZETA, and the kray council for scientific labor organization, the conference attracted great attention from the economists and from the party, government, and the economic workers of the kray. The basic report was delivered by the first secretary of the kraykom CPSU P. S. Fedirko (his article was published in the previous issue of this weekly). Below a brief report on the work of the conference is published.

In his speech at the November (1979) Plenum of the CC CPSU L. I. Brezhnev said that in order to make fuller use for our progress of the enormous reserves which exist at every work sector it is necessary to have a rise in the level in management in the broadest meaning of these words.

Krasnoyarskiy Kray is a vast economic region in which definite experience of economic work has been gained, including in associations. An extensive search is being conducted for effective forms of managing the processes of the creation and development of territorial-production complexes and industrial centers. Important experiments have been carried out aimed at improving the system of indicators and of criteria for evaluating economic work.

This is making it possible to further improve the level of management of production in keeping with the demands of the new decisions of the party and government on improving the managerial mechanism.

How Are Territorial-Production Complexes To Be Managed?

The experience of the labor collectives of the kray and of other industrial centers convincingly shows that the development of territorial-production complexes is an effective direction for increasing the efficiency of the economy. The Sayanskiy territorial-production complex which is being created in Krasnoyarskiy Kray in accordance with the decisions of the 25th CPSU Congress is already giving the country electric energy, coal, railroad platform-containers and containers themselves, light industry products, electrical engineering output, and marble. Next year it is planned to substantially increase the extraction of coal in the Kansk-Achinsk Basin on the basis of which the creation of which a powerful new fuel and energy complex has already been begun.

Taking note of the economic importance and efficiency of complexes, the participants of the conference in Krasnoyarsk pointed especially to the necessity for a clear definition in the future of the development of the management structure with regard to the peculiarities of the individual stages of the formation of a territorial-production complex.

"The process of the creation of a territorial-production complex," G. P. Belyakov, the head of the Department of Economics at the Krasnoyarsk Politechnic Institute, noted, "can be divided into several stages. Each of them poses tasks for management in its own way. The most responsible one is the initial stage. The experience in forming the Kansk-Achinsk energy complex suggests that it is important to have a pre-planning technical and economic substantiation and a technical plan of the territorial-production complex which are common for the complex. This is of fundamental importance for the economic substantiation of the development of the complex, the coordination of the efforts of various branches and organizations, and the solution of the problems of the overall developments of the territory. These documents have the task of bringing the kind of organization into the process of creating a territorial-production complex which is sometimes lacking.

How repeatedly have we had occasion to convince ourselves that the success of the initial stage to a large extent determines the effectiveness of all of the subsequent stages and the achievement of the final result. R. P. Kharlamov, the chief of the division of industrial centers of the Krasnoyarsk "PromstroyNIIproyekt" Institute, described how the institute had developed and Gostroy USSR had approved ten schemes of general plans for industrial centers which are being created in the krey.

The estimated economy from the realization of these schemes is calcualted at 200 million rubles in capital investments and 36 million rubles in annual operating expenditures. Through the group siting of enterprises there will be a relative decrease in the need for labor resources of 2000 people in the kray as a whole.

Recently the scheme of a general plan for the Sharypovskiy center was approved. General center transportation, water supply, sewerage, communications, and electric supply facilities will be built here as will woodworking, motor vehicle repair, and prefabricated ferroconcrete plants. This will yield an economy of capital investments of 30.5 million rubles and of 5.8 million rubles in annual operating expenditures. The territory which has been assigned for the construction for the industrial center's facilities has been decreased by 60 hectares compared to the original calculation.

The conference participants showed great interest in the development of effective forms of management for the complexes. Despite the great diversity of the variants being proposed, the experience which has been gained in the kray testifies in favor of creating coordinating agencies both on the level of the national economy (for solving the fundamental problems of the formation and development of a territorial-production complex) and on the level of the territorial production complex (for coordinating the activities of the enterprises and organizations in matters which are within the competence of a complex).

In the opinion of many of the conference participants, special consideration is merited by the fundamental scheme for the management of a territorial production complex (TPC) which has been worked out by the All-Union Scientific Research Institute of Systems Research of the USSR Academy of Sciences and which has at its basis the joint responsibility of the organizations of several ministries for accomplishing the final tasks of the development of a complex. It is proposed that the experiemental testing and working out of this structure be begun with the creation of the Kansk-Achinsk fuel and energy complex.

Special-Purpose Programs Put Into Practice

Great attention was devoted at the conference to special-purpose programs as an effective instrument for solving the scientific and technical and regional problems of the formation and development of a TPC and also as forms of managing these programs. The successful use of the forms in managing the programs, in particular, at the "Uralelektrotyazhmash" the Kama Motor Vehicle Plant, and the Kherson Combine Plant gave rise to a special interest.

Their essence consists in giving the managerial agency of the program authority which provides it with the possibility of effective day-to-day direction of the fulfillment of work. It is given the full responsibility for achieving the goals of the program, for the quality of final results, and for their attainment schedules.

These so-called matrix (problem) forms of management are also finding an application in Krasnoyarskiy Kray. As L. D. Demko, the first deputy chairman of an association for production and technical supplies for agriculture, related, this kind of structure of managing material and technical supplies for sovkhozes and kolkhozes is being used in the kray agricultural equipment system, and the next order of business is the development of a management structure for the entire system of production and technical supplies for the agriculture of the kray.

The conference participants emphasized that the necessity had arrived for developing an overall special-purpose program for the development of interbranch productions in the kray. As was noted by the department head at the Krasnoyarsk Polytechnic Institute P. M. Konevskikh, today almost every machine building plant produces its own castings, billets, tools, rigging, and hardware.

In the opinion of the conference participants the preparation of such a program could be jointly be carried out by the kray planning commission, the Krasnoyarsk division of economic research of the Institute of Economics and Organization of Industrial Production of the Siberian Branch of the USSR Academy of Sciences, and the Krasnoyarsk Polytechnical Institute. In the future it could become the part of broader work to increase the efficiency of all interbranch productions in the kray.

Note was taken of the effectiveness of the special-purpose program for managing the creation of the very large Minusinsk Electrical Engineering Industrial Complex. It combines the interests of seven sub-branches of the Ministry of Electrical Engineering Industry in building 12 plants for the complex, and ensures the stage-by-stage construction and commissioning of enterprises and the coordination of construction of industrial and civil objects.

Note was taken at the conference of the importance of realizing the point in the decree of the CC CPSU and USSR Council of Ministers regarding ensuring the necessary coordination between the special-purpose programs and the corresponding sections of the plan and financial resources.

With Regard to Conditions and Experience

The problems of a further improvement of the organizational structure of managing large branch complexes are closely connected with the problems of the formation of the TPC. The speeches of the deputy general director of the Noril'sk Combine B. V. Kazakov and the chief of the sector for improving the organization of the management of the combine V. V. Golovushkin revealed measures to strengthen the functions of forecasting,

analysis, and of the solution of long-term problems in the mangement system.

The chief engineer of the "Krasnoyarsklesprom" V. V. Shtrek raised the important issues of improving the structure of production associations in the branches connected with the procurement and the processing of timber in his speech.

"The most fruitful production associations," he noted, "have proven to be those which contain timber procurement and timber processing enterprises which perform operations from the procurement of the timber to the production of the finished output. In the "Khakasles" Association, for example, there has been an improvement in supplying production with raw materials and in their use on the basis of processing waste.

Within this association is the Chernogorsk Housebuilding Combine, one of the first in the kray to have shifted to hauling timber in dressed whole trees. Now every felled tree here is used at the level of 88 percent. The entire upper part which in the past either remained in the forest area or was burned is now turned into so-called balances -- raw materials for cellulose and paper and hydrolysis productions. Firewood and short timber is turned into packaging material. During the last three years the production of commodity output from each cubic meter has increased by 1 ruble and 64 kopeks through a better use of the timber. However, the reserves for increasing the yield from forest areas and production capacities in the association are still far from exhausted."

At the same time, many problems of the development of associations which have not been fully solved were discussed in the speeches. As was noted by V. V. Shtrek, model structures and personnel schedules have not yet been approved for associations. Certain associations in the "Krasnoyarsklesprom" were formed without a sufficient substantiation of the optimal nature of their staff schedules and without the common technological facilities for their enterprises. In his opinion, it would be useful to transfer a number of woodworking enterprises and also procurement enterprises themselves into "Krasnoyarsklesprom."

Economic Interrelations and Planning Discipline

We know that the most improved structure of management may not produce the desired results if its organization is not backed up by competent cadres, their performance discipline, and by their responsibility for final results. "...Discipline and order are always necessary," L. I. Brezhnev said at the November (1979) Plenum of the CC CPSU. "Now, however, when the scope of our economic work has grown to gigantic

proportions and when the network of economic relationships is becoming increasingly complex, dense, and far-flung they are especially necessary."

Talk of strengthening planning discipline could be heard in practically all of the speeches of the conference participants. In particular, the chief of the administration for material and technical supply of Krasnoyarskiy Rayon A. I. Pertsovich examined the practice of the fulfillment of planning assignments and contact commitments, and the senior scientific associate at the Institute of Economics and Organization of Industrial Production of the Siberian Branch of the USSR Academy of Sciences S. A. Dashkovskiy considered the ways to strengthen planning discipline in the system of intrabranch and interbranch relations in production cooperation.

The following example was cited. In recent years the quality of output has worsened in the Krasnoyarsk association for the production of grain harvesting combines. The enterprise suffered large losses which were reflected in the overall results of its work.

The failure of related enterprises to fulfill delivery plans for component products has led to the fact that the combines have to be removed from the conveyor in an incomplete state. In particular, in 1977 15,000 such machines came off the conveyor, and in 1978, 9.3 percent more -- 16,300.

Especial attention at the conference was directed toward increasing the role of labor collectives in strengthening discipline and order. Note was taken of the great role of the team organization of labor in cultivating responsibility for the performance of one's duty. In the reductor shop of "Sibtyazhmash" where 60 percent of the workers are members of overall teams labor turnover is 2.5 times lower than in the collective as a whole. As was related by the secretary of the association's party committee V. I. Yemel'yanenko, the team organization and stimulation of labor are exercising an active influence on increasing the production efficiency of the "Abakanvagonmash" Industrial Association. However, the team organization of labor is still being introduced slowly at the kray's enterprises.

The director of the Krasnoyarsk Cellulose and Paper Combine M. T. Nagimulin concentrated attention on strengthening the organizational role of the party organization and of executive cadres in cultivating a feeling of responsibility for the fulfillment by an enterprise collective of state assignments and counter-plans. The general director of the "Krasnoyarskugol'" Production Association V. V. Toskayev said that a clear organization of control over the fulfillment of plans and socialist commitments plays a large role in cultivating planning discipline in a collective.

The conference worked out concrete recommendations whose realization will make it possible to more successfully implement the party's demands on raising the level of the management of production.

2959
CSC: 1820

END